FY05 SECTION 319(h) PROPOSAL APPLICATION

PROJECT: Killearn Lakes Restoration:
Clean Lakes Phase 2 And 3 Project

PROJECT FUNDING: $322,000.00 **FY05 319** $247,000.00 **Match**

LEAD ORGANIZATION: Leon County

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COOPERATING ORGANIZATIONS: Leon County
Killearn Lakes Homeowners Association
Northwest Florida Water Management District
Florida Department Of Environmental Protection
Ochlockonee Soil And Water Conservation District
Leon County Cooperative Extension Service
Golden Eagle Homeowners Association

PROJECT ABSTRACT: The Killearn Lakes Plantation (KLP) lakes/stormwater ponds are in the Ochlockonee-St. Marks DEP Group 1 Watershed. They drain into Lake Iamonia, which is listed on FDEP's St. Marks Master 303D list as impaired and scheduled for a TMDL in 2007. Individual lakes and "green" public areas within the chain, are listed for various problems, including high bacteria, but were dropped from the verified list because of insufficient data. These lakes have been shown to have high TSI's and contribute nutrients to Lake Iamonia. The KLP lakes are also recreational water bodies used by anglers and boaters in a highly urbanized area. Since 1993, water quality has generally declined in all lakes based on Lake Watch data collected by volunteers. Stormwater runoff carries significant nutrients and other pollutants into all KLP lakes. As a result, aquatic plants have expanded in many individual lakes during the past 20 years as rapid residential development continued.

PROJECT LOCATION AND WATERSHED CHARACTERISTICS: Killearn Lakes, Leon County, Florida, north of the City of Tallahassee

Watershed Name:	Ochlockonee River Watershed
Latitude:	30.60
Longitude:	-84.24
Hydrologic Unit Code(HUC):	3120003

Land Uses within the Watershed (acres and percentages of total):

Land Use		Acres	%
Land Use Totals (Acreage and %)			

POLLUTION REDUCTION STRATEGY: Lake Iamonia (& it's watershed) is on the NWFWMD SWIM priority list. The KLP Lakes are not detailed in the County Master Stormwater Plan (Theresa Heiker, personal communication). The KLP Watershed/Lake Management Plan is outlined below and in Appendix B.

Introduction

Killearn Lakes Plantation (KLP) is a rural residential development that was initiated in the early 1970's. When fully developed, it would include more than 4,000 homes scattered throughout the rolling hills of northeast Leon County. In order for developers to acquire permits, a chain of large holding ponds or lakes was designed and created to capture storm water runoff before it entered Lake Iamonia, a natural marsh/lake approximately 6,000 acres in surface area. The origin of these lakes/holding ponds has been described by Harper et al. (2000) . They reported aerial photography from 1937 did not show any of the current KLP lakes. Lakes Pine Hill, Pettygulf, and Lower Diane were visible in the 1962 photos, while Upper Diane and Monkey Business were under construction at that time. Lake Arrowhead was first visible in the 1976 aerial photographs of the area. These six man-made lakes would serve as future holding/treatment ponds as well as recreational waters for future development and home sites. The estimated area of these six holding ponds/lakes is approximately 205 acres.

Because of the remote location of the KLP development, sheet flow drainage and septic systems were utilized to handle stormwater and sewer during early phases (I & II) of development. Although residential constructed started in the late 1970's it was slow due to poor economic conditions and high interest rates. During the first 10 years, storm water and sewage problems were minimal when the KLP sub-division was dominated by large undeveloped "green areas with vegetation" or drainage pathways. After the construction boom in the mid to late 1980's, flooding problems and failed septic systems began to occur as more than 25% of the project was developed with residential homes. Unfortunately, much of the land has some type of clay, which does not percolate well. The original developer and Leon County officials addressed some of the flooding problem areas on an individual basis. The storm water and septic problems were inevitable as more people flocked to this rural northeast development as new schools were established. Modifications to the original storm water drainage system and a new sewer system was implemented to address septic and flooding issues in newest developments. Flooding and septic problems were exacerbated by the commercial development in the Bradfordville area from the late 1990s through 2004. Drought conditions from 2000-2004 allowed continued commercial and residential development in low areas with a limited number of flooding and septic failures.

Today in 2004, KLP is approaching 100% "build-out" in most units and the remaining green areas and small local holding ponds are not sufficient to handle the amount of untreated storm-water and septic runoff without significantly impacting the water quality of most lakes (Appendix A - Lake

Watch Data 1993- 2003 with Figures). The Lake Watch Program has provided water quality data in all lakes since 1993 and fisheries management data and recommendations has been collected by Mr. Charles Mesing. This increased storm water runoff provides sedimentation and excessive nutrients (nitrogen and phosphorous) to potentially grow extensive communities of aquatic macrophytes, microscopic and/or filamentous algae. Other hydrocarbon pollutants may also enter KLP lakes via stormwater/septic runoff waters. Appendix B contains a brief summary of fish and plant communities of each lake.

The following is a watershed/lake management plan and a list of future needs to meet our 10-year objectives and goals.

Problem statement: Development in KLP has increased significantly in the past 10 years, and consequently storm-water, sediments and nutrients entering our lakes has resulted in an overabundance of aquatic plants and or dense algae blooms, which has impacted lake esthetics, reduced recreational activities, impacted fisheries, and degraded water quality and the quality of life for homeowners.
Problems and Issues with KLP Lakes

1) The maintenance responsibility of KLP lakes has been unclear making it difficult to conduct restoration/maintenance efforts
2) Exotic aquatic vegetation has been introduced into the lakes.
3) Average water depths are generally less than 6 feet for all lakes.
4) Aquatic vegetation can completely cover all lakes if left alone due to shallow water depths.
5) Storm-water and septic runoff carries significant amounts of sediments and nutrients (N. P.), which fuel vegetation growth, and degrade water quality.
6) Sediments have accumulated in every lake during the past 15 years.
7) Silt and sediment barriers are not functioning properly in most lakes.
8) Water quality has continued to degrade through out the KLP chain since1985.
9) Inadequate emergency spillways to carry excess water during significant rain events or tropical storm events.
10) Silt barriers not properly installed or maintained by builders or inspected by county officials.
11) Shallow water depths cannot control aquatic vegetation.
12) Homeowners shoreline vegetation is often mowed to the waters edge of the lake.
13) Lack of structure or habitat to provide cover for sportfish.
14) Future development will continue to degrade water quality in all KLP lakes.
15) Inadequate funding to address sewage and sedimentation problems.
16) Garbage and trash are entering our lakes more than ever.
17) No acceptable sewage and storm water plan for KLP.
18) Over-fishing or harvest of largemouth bass in some lakes.
19) Many lakes can't be lowered with existing old rusting structures specifically rods to open gate valves.
20) Enforcement of property or buffer lines around all lakes.
21) Improve areas to launch and store personal recreational boats.
22) Flood control structures rust quickly and need repair every 7-10 years.
23) Access for outsiders with keys is too easy.
24) Insufficient parking at all lakes.
25) Garbage and trash in and around all lakes has increased in the last few years.
26) Funding to address problem issues of each lake.

Information and Solutions to Problems

1) Develop aquatic plant and fisheries management objectives for each lake.

a. Grass carp and herbicides are used to control aquatic vegetation.
b. Maximum vegetation levels for all lakes.
c. Maintain Grass carp every 5-7 years to meet vegetation goals.
d. Herbicide use when necessary for problematic/exotic plants.
e. Economical verses aesthetics values and objectives.
f. Eradicate exotic plants such as Hydrilla and Water Hyacinths.
g Develop Fish Stocking strategies each lake as needed to meet objectives.
h. Develop appropriate fishing regulations to meet objectives.
i. Investigate whether fish are safe to consume.
2) Educate residents about the fish conservation
3) Identify, map, and inspect all silt barriers and enforcement of county permits.
a) Identify sediment problem areas in each lake.
b) Send letters to builders and county officials for permit violations.
4) Educate our community about county permits, rules, and, regulations concerning developing properties.
5) Volunteer cleanup weekends around and in the lakes.
6) Volunteers to place submerged structure such as trees in deep areas of the lakes.
7) Increase law enforcement throughout the community.
8) Volunteer / Watch Dog group to identify permit violations within KLP.
9) Inspect dams and test over flow structures on annual basis.
10) Identify the desires and uses of the lakes by local residents and homeowners.
11) Prioritize aquatic plant management and sediment scraping for each lake.
12) Sediment could be used to create wildlife islands and or fishing peers for anglers.
13) Monitoring- Annual Aquatic Vegetation and Fisheries surveys.
a. Monthly Lake Watch Samples for water quality and vegetation surveys
b. Annual surveys of aquatic plants and fish populations for all lakes.

Objectives for Managing KLP Lakes for the Next 10 Years:

1). Adaptively manage the KLP Chain of Lakes.
2). Inspect and repair all dams and overflow structures to meet safety standards.
3). Repair and relocate the emergency spillway on Lake Blue Heron.
3). Identify realistic aquatic plant and fishery goals for all lakes.
4). Eliminate hydrilla, water hyacinths, and other exotic plants from the lakes.
5). Remove sediments in lakes, which impact their ability to function properly.
6). Improve water quality and nutrient loads entering all lakes.
7). Improve fish habitats with adding structure to all lakes
8). Develop and implement a sediment management strategy for all lakes.
9). Improve vegetated lakes edges and littoral zones when ever feasible.
10) Construct fishing piers from excess sediments in the lakes when feasible.
11). Reduce the amount of sediments entering the lakes with properly functioning silt barriers, small catch basins, swells or ditches where feasible.
12). Lobby for a new sewage system and more efficient storm water system to reduce sediments from entering the lakes.
13) Improve the number, health and condition of the sportfish communities.

*It should be noted that the KHOA plans to continue to update and enhance the KLP watershed/ Lake Management Plan in the upcoming years 2004 – 2005 according to the process outlined by VanDyke, 1994.

PROJECT OBJECTIVE(S):

- Improve the stormwater treatment capabilities of KLP lakes that flow into Lake Iamonia.
- Assess the results of lake restoration activities.

- Determine the need, feasibility (economic and aesthetic) for additional restoration activities and NPS BMP installation.

- Prepare documentation of the restoration efforts that can be used to assess the applicability of these techniques in other watersheds.

PROJECT DESCRIPTION: The proposed project has been developed in accordance with the "Supplemental Guidance for the Award of Section 319 Nonpoint Source Grants in FY 2000" that was issued by Robert H. Wayland III, Director, U.S. EPA Office of Wetlands, Oceans, and Watersheds on December 21, 1999. This guidance indicated that the Senate Appropriations Committee included language in Senate Report 106-161, accompanying the Senate's FY 2000 appropriations bill (S. 1596) directing EPA to use section 319 funding to implement Clean Lakes projects. Specifically, the report stated:
"Clean Lakes program activities are to be funded through the sec. 319 nonpoint source grant program. The Committee suggests that 5 percent of the section 319 funds be allocated to clean lakes, and that EPA better integrate the Clean Lakes and section 319 programs by incorporating the section 314 guidance into the 319 guidance."

The EPA guidance includes a number of suggestions as to how the states should use Section 319 funds for Clean Lakes efforts. These suggestions include the following:

1. We suggest that each State use at least 5 percent of its section 319 funds for Clean Lakes activities to address the restoration and protection needs of priority lakes, ponds and reservoirs.
2. We suggest that States give priority to funding the following Clean Lakes activities.

a. Lake Water Quality Assessment (LWQA) projects
b. Phase 1 Diagnostic/Feasibility Studies
c. Phase 2 Restoration/Implementation Projects
d. Phase 3 Post-Restoration Monitoring Studies

The KLP lakes/stormwater ponds are a prime candidate for Clean Lakes Phase 2 and 3 funding through the 319 program.

Background

The Killearn Lakes Plantation (KLP) Chain of Lakes drain into Lake Iamonia on the southern shore. Lake Iamonia is a mostly oligotrophic 5,757 acre lake, well known for its superb wildlife habitats.

The Lester Cove, Phase I, Base Flow Report reached the following conclusions:
1) Monkey Business Tributary (MBT), which issues from the 'Killearn Lakes Plantation Chain of Lakes' delivers most of the nutrients to Lester Cove in times of low water, base flow or drought.
2) A seep from one of the Waste Water Treatment Ponds (WWTP) consisting of 80% effluent was found. Surface and subsurface flows consisting of 50% effluent were found at the Killearn Lakes Impoundment (KLI).
3) The data clearly show that under low flow/drought conditions the nutrient loading to Lester Cove was dominated by Monkey Business Tributary (MBT) and the Talquin Facility was found to have a negligible impact.

The Lester Cove, Phase II, The Storm Report relates several important conclusions:

1) Lake Iamonia is a clean, mostly oligotrophic, 5,757 acre natural lake, whose major source of nutrient enrichment is the Ochlockonee River.
2) The water bodies in the "Killearn Lakes Plantation Chain of Lakes" are not natural lakes, they were designed, constructed and permitted to function as Stormwater Retention Ponds. They are supposed to settle out the stormwater collected in the residential development, protecting Lake Iamonia.
3) The waters in the 'Killearn Lakes Plantation Chain of Lakes' become eutrophic at Lakes Arrowhead, Petty Gulf, Pine Hill, Diane, Blue Heron and Monkey Business. All the lakes are eutrophic while Lake Pine Hill is considered mesotrophic based on Lake Watch parameters (Lake Watch, 2003). The eutrophic status of the 'Killearn Lakes Plantation Chain of Lakes' continues into Lester Cove. Water quality improves as one moves out of Lester Cove towards the center of Lake Iamonia where water quality is quite good.
5) During storm events, Monkey Business Tributary carries at least twice the flow of water, containing higher concentrations of pollutants, than the rest of Lester Creek. A storm dropping an inch of rainfall can cause 60 days of dry period loading of nutrients within a few hours time.
6) Almost 10,000 ecological measurements demonstrate that Monkey Business Tributary dominates and defines the water quality characteristics of Lester Creek. The primary source of nutrient enrichment in Lester Cove comes from the 'Killearn Lakes Plantation Chain of Lakes' via Lake Monkey Business Tributary, not from the Talquin Sewage Treatment Facility.

The bottom of WWTP, where the seepage seemed to arise from, was refurbished. Efforts were also made by Talquin to release the waters in the Killearn Lakes Impoundment, a temporary 'lake' formed by a series of beaver dams. A dump of maintenance equipment in Golden Eagle Golf Course was removed. Shortly after the project began, Kevin Pope (Environmental Compliance Officer for Leon County), added seven stations in Lake Iamonia to the Leon County Lakes Ecology Project, an ongoing monitoring effort by Leon County in which water quality data is collected on area lakes and added to the historical data base. This represents the first comprehensive examination of this significant water resource located in northern Leon County. Now, the actual ecology of Lake Iamonia could be examined. Due to the lack of Storm Events and further questions regarding the environmental impacts of seepage in and around the Talquin facility, a second phase of the Lester Cove Study was implemented.

The following actions were recommended to improve conditions in the Lester Cove:
1) Construction runoff into the 'Killearn Lakes Plantation Chain of Lakes' was a dominant component of the sediment load. The amount of broken ground in runoff areas needs to be minimized. The Killearn Lakes Homeowners Association has hired staff to inspect construction sites.
2) Fertilizers, raw nutrients used to stimulate lawns need to be restricted within the Lester Creek basin.
3) The ponds in the 'Killearn Lakes Plantation Chain of Lakes' are being managed to minimize aquatic vegetation, not as natural lakes or retention ponds. They have high nutrient and herbicide levels. Beneficial aquatic plants such as Fragrant Water Lilies have disappeared from the ponds. There are insufficient to no aquatic macrophytes to absorb nutrients that wash into the system. These nutrients are converted directly into algae, which wash out of the ponds and into Lake Iamonia with each storm. The ponds in the 'Killearn Lakes Plantation Chain of Lakes' are stocked with Triploid Grass Carp to control aquatic plants in all lakes as directed by the KLP Fish and Wildlife Committee. In addition Channel Catfish are have only been stocked in Lake Monkey Business for kids fishing events. These types of fish keep the ponds muddy. The control structures in some of the ponds are faulty and leak from the base. This allows the dirtiest water in the ponds to flow into Lake Iamonia. These ponds need to be excavated and deepened. They were built to shallow to maintain open water. The stocked fish need to be removed. Populations of beneficial plants need to be re-established and these ponds need to be restored and maintained as

aescetically pleasing biological filters for the protection of Lake Iamonia.
4) Seepage identified at the Talquin Facility was rather minor in the potential to nutrient loading budget of Lake Iamonia. Our monitoring was highly beneficial since it led to obvious improvements in the facility. The WWTP was resurfaced. Greater retention capacity was achieved with new ponds being built after the breach, which sent treated waste water into Golden Eagle Plantation. The Killearn Lakes Plantation Impoundment should be modified as a Stormwater Treatment Pond since it already functions in that capacity and could assist in protecting Lake Iamonia.

Loading from Monkey Business Tributary far exceeded loading from the parts Lester Creek flowing from the Talquin Facility. In ecological matters it is always prudent to fix the obvious problem first and check to see if there really is an improvement. That is cheapest and most cost effective. The 'Killearn Lakes Plantation Chain of Lakes' are not functioning as efficient holding ponds. The 'Killearn Lakes Plantation Chain of Lakes' are currently not managed as Stormwater Retention Ponds, but as picturesque lakes, to the detriment of Lake Iamonia. Aquatic plants need to be re-established to absorb the nutrients. The northern two lakes need to be deepened so that the lakes do not become overgrown with beneficial plants once they are re-established. The amount of broken ground in runoff areas needs to be minimized. Fertilizers need to be limited within the drainage basins. After the standpipe and other associated problems are fixed, stormwater impacts need to be re-evaluated and a few more storms should be monitored. The Leon County Board of County Commissioners, the Killearn Lakes Homeowners Association, the Ochlochonee Soil and Water Conservation District, the Northwest Florida Water Management District, the Leon County Cooperative Extension Service and the Golden Eagle Homeowners Association all interacted to make this project possible.

The major components of the program are outlined below:

Contol Structure Retrofit
The control structures between the lakes will be upgraded and optimized for sediment and nutrient removal. Lake Blue Heron's emergency spillway will be replaced as it is highly degraded. Other control structures to be upgraded will be standpipes located in Lake Monkey Business and Lake Blue Heron. The estimated annual mass of pollutants removed is included in the "Estimated Pollutant Load Reduction" section.

Catch Basin(s)
Four catch basins will be constructed/implemented (3 on Lake Blue Heron and 1 on Lake Monkey Business).

Sediment Removal
Sediments will be removed from Lake Blue Heron. It is estimated that at least 47,778 yds3 (or 15 acres of sediments, 2 ft depth) will be removed. The proper permits (DEP and County) will be secured, and the sediments will be analyzed accordingly. It is hoped that the sediments will be used to create an island wildlife sanctuary within Lake Blue Heron, and for berm construction. The remainder of sediments or "muck" will be disposed of in a proximal and suitable site. Beneficial aquatic plants and shoreline buffers will be planted in and around the KLP water bodies.

Shoreline Buffer Zones
Beneficial aquatic plants and shoreline buffers will be planted in and around all the lakes (Arrowhead, Pine Hill, Petty Gulf, Diane, Lake Blue Heron and Lake Monkey Business). Initial plantings will include species such as Lemon Bocapa, Arrowhead (Sagittaria), Blue Flag Iris, and Yellow Canna, among many others. The first phase of aquatic plantings will focus on continuous blooming emergent aquatic plants as a means of easing homeowner acceptability of aquatic plants around and in their lakes.

Two small canal/coves in the upper end of Blue Heron could be "fenced off" with parallel PVC pipes attached to 4x4 posts which would keep grass carp from this newly created aquatic vegetated area and grow significant beneficial SAV aquatic macrophytes such as Lemon Bacopa and others. These "mini wetland areas" will help filter incoming stormwater discharges. This design would allow grass carp to maintain vegetation control in the main section of the lake, while establishing a "mini wetland" area in the confined canals, which receive most of the stormwater discharge and sediments. This design used to confine grass carp to designated areas may also be applicable on Lake Monkey Business, Lake Diane, and possibly Lake Pettygulf, if local homeowners would approve. Most of these high stormwater discharge areas do not have many lakefront residences. This concept is more sellable to KHOA members and should be the most beneficial and cost effective BMPs we are suggesting. Maintenance responsibilities will be handled by the KHOA, who will make use of their cadre of volunteers. Volunteers will also be recruited through the education outreach efforts.

Berm and Swale Construction
Sediments removed from Lake Blue Heron will be used to construct berms parallel to the direction of stormwater flow will be placed in the grassy swales draining sheetflow into the KLP Lakes. Planning and community input will be the first phase of berm construction. The exact locations of berms will be determined, and will involve a combination of private property and KHOA "greenways" areas. Around Lake Blue Heron, the Golden Eagle Golf Course has made a preliminary agreement to allocate at least 1,000 feet to berm construction. Berms will be gently sloping in design and include cordgrass planting.

The following areas have been identified as potential berm/swale sites (distinguished by greenway/public and private property areas):
Lake Blue Heron: 1,500 feet greenway and 4 acres of private property
Lake Pine Hill: 1200 feet greenway and 20 acres of private property
Arrowhead: 1,500 feet greenway and 6.5 acres of private property
Petty Gulf: 1,075 feet greenway and 8 acres private property
Monkey Business: 750 feet greenway and 3 acres of private property; in addition there are 50 potential private acres along Lester Creek that flows directly into Lake Iamonia.

Establishing Grassy Pathways to Lakes
Many roads and pathways leading to our lakes do not have adequate grassy vegetation to filter stormwater heading into the lakes. These pathways need sod to slow the stormwater and help filter the larger sized particulate materials before they enter the lakes. Maintenance activities will be conducted by KHOA.

Rain Gardens
Areas immediately upstream from the berms will be planted with vegetation that can help cleanse the stormwater. These will be incorporated and managed as part of the shoreline buffer zone system. Similar to the shoreline buffer zones, maintenance responsibilities will be handled by the KHOA.

Public Education
1) Town meetings and workshops – Public workshops will be held to educate the residents of the watershed about personal BMPS for pollution reduction and habitat improvement, as well as techniques and technical assistance for development and maintenance of personal shoreline buffer zones and rain gardens. The Leon County Extension Service and tappwater.org has agreed to facilitate the public outreach workshops.
2) Evaluation of the potential for improvement of community access. The potential for improved

public access will serve as a means of enhancing a community sense of shared ownership and stewardship.
3) Educational materials including brochures, newsletters and CDs, signage, communication on radio and television, will be disseminated to educate the residents of the watershed on BMPs for residential communities. The KHOA volunteers will be responsible for the newsletter and brochures and the volunteer recruitment effort for the shoreline buffer zone program.

Monitoring
Over the three-year period, monitoring will be performed to monitor the effectiveness of NPS reduction along with the 6 original stations that will be sampled once a month for the following parameters:

A. Station GPS Coordinate
B. Time of Day
C. Cloud Cover
D. Windspeed and Direction
E. Station depth (m)
F. Stage (ft)
G. Secchi Depth (m)
H. Water Temperature (degrees C)
I. Turbidity (NTU)
J. Dissolved Oxygen (mg/L)
K. Percent Oxygen Saturation
L. PH (units)
M. Specific Conductivity (microsemins)
N. True Color (PtCo Units)
O. Alkalinity (mg/L)
P. Chloride (mg/L)
Q. TSS, Residue, @ 103-105 degrees C (mg/L)
R. VSS, Residue, Volatile, @ 550 degrees C (mg/L)
S. FSS, Residue, Fixed, @ 550 degrees C (mg/L)
T. TDS, Residue, @ 103-105 degrees C (mg/L)
U. VDS, Residue, Volatile, @ 550 degrees C (mg/L)
V. FDS, Residue, Fixed, @ 550 degrees C (mg/L)
W. Total Phosphorus (TP, mg/L)
X. Total Inorganic Phosphorus, Ortho-Phosphate (TIP, mg/L)
Y. Nitrite (mg/L)
Z. Nitrate+Nitrite (mg/L)
AA. Nitrate (mg/L)
BB. Total Inorganic Nitrogen (TIN, mg/L)
CC. Ammonia (mg/L)
DD. Total Kjeldahl Nitrogen (TKN, mg/L)
EE. Total Nitrogen (TN, mg/L)
FF. TN/TP Ratio
GG. Chlorophyll a (mg/L)
HH. Chlorophyll b (mg/L)
II. Chlorophyll c (mg/L)
JJ. Phaeophytin (mg/L)
KK. Phaeophytin Corrected Chlorophyll a (mg/L)
LL. Dissolved Organic Carbon (DOC, mg/L)
MM. Particulate Organic Carbon (POC, mg/L)
NN. Total Organic Carbon (TOC, mg/L).

The remaining monitoring activities including sediment quality, biology (aquatic macrophytes and fish population surveys) and stormwater loading are outlined in Appendix C.

ESTIMATED POLLUTANT LOAD REDUCTION:

Bmp's Installed		TSS kg/yr	TP kg/yr	TN kg/yr	Sediment kg/yr	BOD kg/yr	Other kg/yr	Other kg/yr
Pond 1								
Pollutant Loads	Pre-Project							
	Post-Project							
	Load Reduction							
	% Reduction							
Pond 2		TSS kg/yr	TP kg/yr	TN kg/yr	Sediment kg/yr	BOD kg/yr	Other kg/yr	Other kg/yr
Pollutant Loads	Pre-Project							
	Post-Project							
	Load Reduction							
	% Reduction							
		TSS kg/yr	TP kg/yr	TN kg/yr	Sediment kg/yr	BOD kg/yr	Other kg/yr	Other kg/yr
Pollutant Loads	Pre-Project							
	Post-Project							
	Load Reduction							
	% Reduction							
		TSS kg/yr	TP kg/yr	TN kg/yr	Sediment kg/yr	BOD kg/yr	Other kg/yr	Other kg/yr
Pollutant Loads	Pre-Project							
	Post-Project							
	Load Reduction							
	% Reduction							

MODEL USED: Spreadsheet Tool for Estimation of Pollutant Load (STEPL) 2.01 (U.S. EPA and Tetra Tech, Inc.).

OUTPUTS/DELIVERABLES:

- Final report* which documents:
- Lakewide water quality and ecological conditions, compared to historical conditions.
- Stormwater loading from primary tributaries.
- Treatment efficiency of BMPs.

And includes recommendations for:

- Further in-lake restoration, if applicable.
- Stormwater pollutant load reduction goals.
- Additional stormwater BMP installation.
- Other management activities.
- Utilization of these restoration techniques in other waterbodies.
- Quarterly Progress Reports
- Water quality and ecological data appendix, including hard and electronic copies
- Provision of all applicable water quality data for upload to STORET

*5 hard copies, plus electronic copies in .pdf and MS Word format

PROJECT MILESTONES:

Task	Activity	Start	Complete
1	Prepare And Submit QAPP	Month 1	Month 3
2	Monthly Water Quality & Quarterly Biomass Monitoring	Month 4	Month 40
3	Annual Sediment Sampling	Month 4,40	Month 4,40
4	Stormwater Sampling	Month 4	Month 40
5	Submerged Aquatic Vegetation Survey	Annually,	
6	Submit Progress Report/Invoice	Quarterly	
7	Bmp Design	Month 1	Month 12
8	Public Education (Continuous)	Month 1	Month 48
9	Bmp Implementation	Month 13	Month 40
10	Prepare And Submit Draft Project Report	Month 35	Month 44
11	Incorporate Dep Comments, Prepare And Submit Final Project Report	Month 46	Month 48

PROJECT BUDGET:

Project Funding Activity	319 (h) Amount	Matching Contribution	Match Source *
Staff	$15,000.00	$10,000.00	County
Travel			
Equipment			
Supplies	$2,000.00	$2,000.00	County
Contractual	$200,000.00	$100,000.00	County
BMP Implementation	$50,000.00	$75,000.00	County
Monitoring	$25,000.00	$50,000.00	County
Public Education	$30,000.00	$10,000.00	County
Other:			
Total:	$322,000.00	$247,000.00	
Total Project Cost:	$569,000.00		

***If a stormwater utility or other dedicated recurring fee is contributing, put that information in the following table.**

MATCH SOURCE INFORMATION:

Match Source Name	Description	ERU/Fee

BUDGET BY TASK:

Project Funding Activity	319 (h) Amount	Matching Contribution	Match Source
Total:			
Total Project Cost:			

OTHER FUNDING (Not Match – such as land acquisition or other federal grants):

Agency	Activity	Amount
Leon County Extension Service	Education Outreach	
Tappwater.Org	Education Outreach	
Nwfwmd		
	Total:	

OTHER INFORMATION: If this is a multi-year project, have you requested sufficient funds to complete the project (assuming funds requested herein are provided)? (State yes or no, and, if no, provide an explanation):

The Lead Organization, as listed on the first page of this form, agrees to comply with all requirements specified in the guidance package and in the federal grant regulations. Checking "no" or "yes, except" will cause the project to have a lower ranking than similar projects by lead organizations that agree to the requirements:

Yes: ☒ **No:** ☐ **Yes, except:** ☐ **(Note: List exceptions below.)**

Exceptions:

REFERENCES CITED:

APPENDIX A

Lake Watch Data Killearn Lakes Plantation (1993 – 2003)

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Arrowhead	2/27/1993	1	31	520	6	1.5	1.5
Arrowhead	2/27/1993	2	26	370	6	1.8	1.8
Arrowhead	2/27/1993	3	30	450	6	1.8	1.8
Arrowhead	3/21/1993	1	27	310	4	3	3
Arrowhead	3/21/1993	2	20	320	4	3.3	3.3
Arrowhead	3/21/1993	3	24	340	4	3	3
Arrowhead	4/17/1993	1	28	400	6	3.5	3.5
Arrowhead	4/17/1993	2	20	310	6	3.5	3.5
Arrowhead	4/17/1993	3	24	370	7	3.5	3.5
Arrowhead	5/16/1993	1	30	460	5	.	Bottom(2.0)
Arrowhead	5/16/1993	2	31	420	7	.	Bottom(2.3)
Arrowhead	5/16/1993	3	26	410	6	.	Bottom(2.0)
Arrowhead	2/19/1995	1	11	190	5	.	Bottom(6.5)
Arrowhead	2/19/1995	2	8	180	5	.	Bottom(6.0)
Arrowhead	2/19/1995	3	12	200	5	.	Bottom(5.0)
Arrowhead	3/23/1995	1	12	200	3	5	5
Arrowhead	3/23/1995	2	11	210	3	5	5
Arrowhead	3/23/1995	3	10	230	5	4.5	4.5
Arrowhead	4/23/1995	1	13	310	2	.	Bottom(5.5)
Arrowhead	4/23/1995	2	16	300	2	.	Bottom(6.0)
Arrowhead	4/23/1995	3	10	320	9	.	Bottom(5.0)
Arrowhead	5/13/1995	1	28	410	9	3.5	3.5
Arrowhead	5/13/1995	2	34	450	7	3.5	3.5
Arrowhead	5/13/1995	3	28	430	8	2.5	2.5
Arrowhead	6/17/1995	1	18	280	5	4.3	4.3
Arrowhead	6/17/1995	2	18	350	6	4.3	4.3
Arrowhead	6/17/1995	3	21	400	6	4.3	4.3
Arrowhead	7/30/1995	1	30	390	19	3.5	3.5
Arrowhead	7/30/1995	2	26	390	18	3.5	3.5
Arrowhead	7/30/1995	3	31	420	16	3	3
Arrowhead	8/20/1995	1	49	600	36	2.3	2.3
Arrowhead	8/20/1995	2	50	740	38	2.3	2.3
Arrowhead	8/20/1995	3	40	570	35	2.3	2.3
Arrowhead	9/17/1995	1	29	430	17	3.5	3.5
Arrowhead	9/17/1995	2	35	410	17	3.5	3.5
Arrowhead	9/17/1995	3	41	490	21	3.5	3.5
Arrowhead	10/22/1995	1	29	510	15	3.5	3.5
Arrowhead	10/22/1995	2	29	710	16	3.5	3.5
Arrowhead	10/22/1995	3	26	620	15	3.5	3.5
Arrowhead	11/19/1995	1	44	400	15	2.5	2.5
Arrowhead	11/19/1995	2	38	490	15	2.5	2.5
Arrowhead	11/19/1995	3	33	570	15	2.5	2.5
Arrowhead	1/15/1996	1	35	490	21	3	3
Arrowhead	1/15/1996	2	32	540	21	3	3
Arrowhead	1/15/1996	3	29	510	21	3	3
Arrowhead	2/18/1996	1	60	580	19	1.8	1.8
Arrowhead	2/18/1996	2	60	580	19	1.8	1.8
Arrowhead	2/18/1996	3	53	570	16	1.8	1.8
Arrowhead	3/24/1996	1	38	420	8	3	3
Arrowhead	3/24/1996	2	37	480	9	3	3
Arrowhead	3/24/1996	3	42	550	11	2.8	2.8
Arrowhead	4/21/1996	1	32	420	22	3.5	3.5
Arrowhead	4/21/1996	2	32	440	15	3.5	3.5
Arrowhead	4/21/1996	3	34	470	14	3.5	3.5
Arrowhead	5/25/1996	1	31	450	14	3.5	3.5
Arrowhead	5/25/1996	2	30	430	13	3.8	3.8
Arrowhead	5/25/1996	3	33	440	13	3.8	3.8
Arrowhead	7/21/1996	1	34	630	17	3.3	3.3
Arrowhead	7/21/1996	2	32	630	14	3.5	3.5
Arrowhead	7/21/1996	3	33	560	14	3.8	3.8
Arrowhead	8/17/1996	1	28	450	13	4	4
Arrowhead	8/17/1996	2	31	480	16	4	4
Arrowhead	8/17/1996	3	31	500	14	4	4
Arrowhead	9/22/1996	1	35	610	20	3.3	3.3
Arrowhead	9/22/1996	2	39	640	20	3.3	3.3
Arrowhead	9/22/1996	3	36	610	21	3.3	3.3
Arrowhead	10/13/1996	1	32	390	14	3	3
Arrowhead	10/13/1996	2	33	390	14	3	3
Arrowhead	10/13/1996	3	35	380	14	3	3
Arrowhead	11/24/1996	1	43	520	22	2.3	2.3
Arrowhead	11/24/1996	2	42	550	23	2.3	2.3

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Arrowhead	11/24/1996	3	46	650	23	2.3	2.3
Arrowhead	12/15/1996	1	38	470	22	2.5	2.5
Arrowhead	12/15/1996	2	43	480	23	2.5	2.5
Arrowhead	12/15/1996	3	36	480	24	2.5	2.5
Arrowhead	1/20/1997	1	35	490	18	3	3
Arrowhead	1/20/1997	2	33	420	17	2.2	2.2
Arrowhead	1/20/1997	3	35	390	15	2.2	2.2
Arrowhead	2/23/1997	1	49	520	22	22	2
Arrowhead	2/23/1997	2	49	490	20	2	2
Arrowhead	2/23/1997	3	49	.	20	1.9	1.9
Arrowhead	3/23/1997	1	40	295	21	1.7	1.7
Arrowhead	3/23/1997	2	38	420	21	1.7	1.7
Arrowhead	3/23/1997	3	40	350	17	1.7	1.7
Arrowhead	4/20/1997	1	37	480	11	2.8	2.8
Arrowhead	4/20/1997	2	34	400	10	2.8	2.8
Arrowhead	4/20/1997	3	38	400	10	2.8	2.8
Arrowhead	5/24/1997	1	47	560	27	2.2	2.2
Arrowhead	5/24/1997	2	49	560	32	2.2	2.2
Arrowhead	5/24/1997	3	47	490	28	2.2	2.2
Arrowhead	6/22/1997	1	41	310	24	1.8	1.8
Arrowhead	6/22/1997	2	41	350	22	2	2
Arrowhead	6/22/1997	3	44	310	23	2	2
Arrowhead	7/22/1997	1	31	560	22	2.4	2.4
Arrowhead	7/22/1997	2	38	680	25	2.3	2.3
Arrowhead	7/22/1997	3	43	650	30	2.2	2.2
Arrowhead	8/28/1997	1	28	430	16	2.5	2.5
Arrowhead	8/28/1997	2	30	510	16	2.6	2.6
Arrowhead	8/28/1997	3	32	310	14	2.6	2.6
Arrowhead	9/21/1997	1	38	540	30	2.5	2.5
Arrowhead	9/21/1997	2	40	560	28	2.5	2.5
Arrowhead	9/21/1997	3	43	580	32	2.7	2.7
Arrowhead	10/19/1997	1	52	670	52	1.5	1.5
Arrowhead	10/19/1997	2	48	460	49	1.5	1.5
Arrowhead	10/19/1997	3	53	580	47	1.4	1.4
Arrowhead	11/23/1997	1	39	450	44	2.4	2.4
Arrowhead	11/23/1997	2	40	470	43	2.4	2.4
Arrowhead	11/23/1997	3	46	540	45	2.2	2.2
Arrowhead	12/21/1997	1	34	480	41	1.8	1.8
Arrowhead	12/21/1997	2	43	540	36	1.8	1.8
Arrowhead	12/21/1997	3	40	420	36	1.6	1.6
Arrowhead	1/19/1998	1	41	520	29	1.5	1.5
Arrowhead	1/19/1998	2	49	510	30	1.5	1.5
Arrowhead	1/19/1998	3	36	420	26	1.5	1.5
Arrowhead	2/25/1998	1	45	460	23	1.1	1.1
Arrowhead	2/25/1998	2	43	430	25	1.2	1.2
Arrowhead	2/25/1998	3	35	420	20	1.2	1.2
Arrowhead	3/23/1998	1	35	460	23	1.4	1.4
Arrowhead	3/23/1998	2	36	420	21	1.4	1.4
Arrowhead	3/23/1998	3	35	360	16	1.4	1.4
Arrowhead	4/24/1998	1	27	320	8	2.8	2.8
Arrowhead	4/24/1998	2	27	350	9	2.6	2.6
Arrowhead	4/24/1998	3	29	430	8	2.5	2.5
Arrowhead	5/22/1998	1	19	530	14	2.8	2.8
Arrowhead	5/22/1998	2	23	520	12	2.8	2.8
Arrowhead	5/22/1998	3	26	570	13	2.7	2.7
Arrowhead	6/20/1998	1	48	950	31	1.8	1.8
Arrowhead	6/20/1998	2	49	1010	31	1.8	1.8
Arrowhead	6/20/1998	3	57	920	34	1.8	1.8
Arrowhead	7/14/1998	1	54	1770	13	1.8	1.8
Arrowhead	7/14/1998	2	47	1620	14	1.8	1.8
Arrowhead	7/14/1998	3	44	1590	13	1.8	1.8
Arrowhead	8/23/1998	1	45	770	43	1.2	1.2
Arrowhead	8/23/1998	2	42	730	46	1.4	1.4
Arrowhead	8/23/1998	3	36	700	48	1.4	1.4
Arrowhead	9/20/1998	1	44	400	26	2.4	2.4
Arrowhead	9/20/1998	2	47	510	23	2.4	2.4
Arrowhead	9/20/1998	3	41	560	25	2.5	2.5
Arrowhead	10/24/1998	1	34	430	19	2.5	2.5
Arrowhead	10/24/1998	2	37	550	16	2.6	2.6
Arrowhead	10/24/1998	3	37	470	20	2.5	2.5
Arrowhead	11/26/1998	1	48	680	47	2	2

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Arrowhead	11/26/1998	2	56	810	42	2	2
Arrowhead	11/26/1998	3	61	810	35	2.1	2.1
Arrowhead	12/24/1998	1	45	590	30	2.1	2.1
Arrowhead	12/24/1998	2	50	640	38	1.9	1.9
Arrowhead	12/24/1998	3	51	720	34	1.8	1.8
Arrowhead	1/21/1999	1	44	750	40	1.7	1.7
Arrowhead	1/21/1999	2	37	800	44	1.7	1.7
Arrowhead	1/21/1999	3	48	850	44	1.7	1.7
Arrowhead	2/26/1999	1	85	950	60	1.4	1.4
Arrowhead	2/26/1999	2	66	950	50	1.4	1.4
Arrowhead	2/26/1999	3	89	910	47	1.4	1.4
Arrowhead	3/30/1999	1	49	640	11	2.4	2.4
Arrowhead	3/30/1999	2	43	560	11	2.4	2.4
Arrowhead	3/30/1999	3	43	540	11	2.5	2.5
Arrowhead	4/29/1999	1	55	750	26	.	.
Arrowhead	4/29/1999	2	52	730	26	.	.
Arrowhead	4/29/1999	3	53	570	25	.	.
Arrowhead	5/31/1999	1	47	770	20	2.8	2.8
Arrowhead	5/31/1999	2	43	690	18	2.7	2.7
Arrowhead	5/31/1999	3	39	510	17	2.8	2.8
Arrowhead	6/30/1999	1	44	1120	38	1.6	1.6
Arrowhead	6/30/1999	2	38	940	36	1.6	1.6
Arrowhead	6/30/1999	3	42	1030	34	1.6	1.6
Arrowhead	7/25/1999	1	36	830	21	2.2	2.2
Arrowhead	7/25/1999	2	37	790	17	2.4	2.4
Arrowhead	7/25/1999	3	37	750	20	2.1	2.1
Arrowhead	8/29/1999	1	42	820	29	1.7	1.7
Arrowhead	8/29/1999	2	43	800	29	1.8	1.8
Arrowhead	8/29/1999	3	48	830	29	1.8	1.8
Arrowhead	9/30/1999	1	48	980	48	1.8	1.8
Arrowhead	9/30/1999	2	44	940	45	1.8	1.8
Arrowhead	9/30/1999	3	46	940	43	1.8	1.8
Arrowhead	10/24/1999	1	67	920	30	1.4	1.4
Arrowhead	10/24/1999	2	64	860	28	1.4	1.4
Arrowhead	10/24/1999	3	54	870	27	1.5	1.5
Arrowhead	11/23/1999	1	65	900	31	1.5	1.5
Arrowhead	11/23/1999	2	62	880	28	1.5	1.5
Arrowhead	11/23/1999	3	63	890	30	1.6	1.6
Arrowhead	12/30/1999	1	91	1350	58	0.9	0.9
Arrowhead	12/30/1999	2	102	1320	46	0.9	0.9
Arrowhead	12/30/1999	3	96	1300	47	0.9	0.9
Arrowhead	1/31/2000	1	109	1450	40	0.9	0.9
Arrowhead	1/31/2000	2	114	1420	40	0.9	0.9
Arrowhead	1/31/2000	3	104	1440	39	0.9	0.9
Arrowhead	2/27/2000	1	95	1360	31	1	1
Arrowhead	2/27/2000	2	100	1350	36	1	1
Arrowhead	2/27/2000	3	100	1390	40	1	1
Arrowhead	4/30/2000	1	52	920	59	0.6	0.6
Arrowhead	4/30/2000	2	58	900	55	0.6	0.6
Arrowhead	4/30/2000	3	54	880	62	0.6	0.6
Arrowhead	5/31/2000	1	41	1010	25	2.5	2.5
Arrowhead	5/31/2000	2	43	930	24	2.5	2.5
Arrowhead	5/31/2000	3	41	1010	23	2.6	2.6
Arrowhead	7/30/2000	1	64	870	25	1.5	1.5
Arrowhead	7/30/2000	2	64	840	25	1.5	1.5
Arrowhead	7/30/2000	3	58	970	26	1.5	1.5
Arrowhead	8/31/2000	1	55	820	40	1.5	1.5
Arrowhead	8/31/2000	2	54	860	38	1.6	1.6
Arrowhead	8/31/2000	3	54	880	40	1.5	1.5
Arrowhead	9/30/2000	1	39	840	16	1.4	1.4
Arrowhead	9/30/2000	2	37	760	17	1.4	1.4
Arrowhead	9/30/2000	3	38	820	16	1.4	1.4
Arrowhead	10/31/2000	1	70	950	34	1.5	1.5
Arrowhead	10/31/2000	2	70	810	34	1.5	1.5
Arrowhead	10/31/2000	3	72	1000	31	1.5	1.5
Arrowhead	1/30/2001	1	77	740	45	1.1	1.1
Arrowhead	1/30/2001	2	64	650	38	1.1	1.1
Arrowhead	1/30/2001	3	78	720	42	1.1	1.1
Arrowhead	3/1/2001	1	42	630	18	1.8	1.8
Arrowhead	3/1/2001	2	44	640	17	1.8	1.8
Arrowhead	3/1/2001	3	44	660	18	1.8	1.8

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI
Arrowhead	5/28/2001	1	43	660	18	2.5	2.5
Arrowhead	5/28/2001	2	44	590	15	2.5	2.5
Arrowhead	5/28/2001	3	46	490	14	2.5	2.5
Arrowhead	7/30/2001	1	27	320	16	1.6	1.6
Arrowhead	7/30/2001	2	27	410	16	1.6	1.6
Arrowhead	7/30/2001	3	28	420	15	1.6	1.6
Arrowhead	9/16/2001	1	19	300	6	.	Bottom(5.5)
Arrowhead	9/16/2001	2	18	270	7	.	Bottom(5.0)
Arrowhead	9/16/2001	3	21	400	7	.	Bottom(5.5)
Arrowhead	10/31/2001	1	12	310	4	.	Bottom(5.0)
Arrowhead	10/31/2001	2	12	270	4	.	Bottom(5.5)
Arrowhead	10/31/2001	3	21	330	5	.	Bottom(5.0)
Arrowhead	12/30/2001	1	22	430	20	3.5	3.5
Arrowhead	12/30/2001	2	22	660	20	3.6	3.6
Arrowhead	12/30/2001	3	22	530	20	3.5	3.5
Arrowhead	2/28/2002	1	33	350	14	3	3
Arrowhead	2/28/2002	2	35	350	15	3	3
Arrowhead	2/28/2002	3	33	340	17	3	3
Arrowhead	4/28/2002	1	30	560	15	3.2	3.2
Arrowhead	4/28/2002	2	32	560	16	3.2	3.2
Arrowhead	4/28/2002	3	32	450	18	3.3	3.3
Arrowhead	5/30/2002	1	32	430	13	3	3
Arrowhead	5/30/2002	2	32	540	14	3.1	3.1
Arrowhead	5/30/2002	3	33	530	16	3	3
Arrowhead	7/26/2002	1	36	430	16	2.1	2.1
Arrowhead	7/26/2002	2	38	560	15	2.1	2.1
Arrowhead	7/26/2002	3	37	530	14	2.2	2.2
Arrowhead	8/28/2002	1	39	550	16	2.1	2.1
Arrowhead	8/28/2002	2	38	620	13	2.1	2.1
Arrowhead	8/28/2002	3	38	450	14	2.1	2.1
Arrowhead	9/30/2002	1	33	580	42	2.2	2.2
Arrowhead	9/30/2002	2	29	720	44	2.3	2.3
Arrowhead	9/30/2002	3	33	740	49	2.2	2.2
Arrowhead	10/12/2002	1	38	790	46	2.4	2.4
Arrowhead	10/12/2002	2	41	670	46	2.4	2.4
Arrowhead	10/12/2002	3	32	820	47	2.4	2.4
Arrowhead	11/28/2002	1	59	630	37	1.5	1.5
Arrowhead	11/28/2002	2	69	950	37	1.6	1.6
Arrowhead	11/28/2002	3	63	830	36	1.5	1.5
Arrowhead	12/30/2002	1	61	830	35	1.6	1.6
Arrowhead	12/30/2002	2	63	820	37	1.6	1.6
Arrowhead	12/30/2002	3	64	820	33	1.6	1.6
Arrowhead	1/26/2003	1	55	640	58	1.1	1.1
Arrowhead	1/26/2003	2	66	780	52	1.1	1.1
Arrowhead	1/26/2003	3	.	.	63	1.1	1.1
Arrowhead	2/28/2003	1	66	830	39	1.2	1.2
Arrowhead	2/28/2003	2	58	870	77	1.2	1.2
Arrowhead	2/28/2003	3	75	1010	64	1.2	1.2
Arrowhead	3/25/2003	1	39	610	32	1.1	1.1
Arrowhead	3/25/2003	2	40	590	31	1.1	1.1
Arrowhead	3/25/2003	3	75	720	31	1.1	1.1
Arrowhead	4/30/2003	1	32	750	12	1.8	1.8
Arrowhead	4/30/2003	2	29	680	10	1.7	1.7
Arrowhead	4/30/2003	3	34	740	15	1.8	1.8
Arrowhead	5/28/2003	1	36	670	28	2.3	2.3
Arrowhead	5/28/2003	2	36	680	27	2.3	2.3
Arrowhead	5/28/2003	3	38	690	26	2.2	2.2
Arrowhead	6/26/2003	1	31	570	16	2.9	2.9
Arrowhead	6/26/2003	2	29	670	17	2.9	2.9
Arrowhead	6/26/2003	3	34	470	17	2.9	2.9
Arrowhead	7/27/2003	1	33	600	17	3.1	3.1
Arrowhead	7/27/2003	2	33	500	17	3.1	3.1
Arrowhead	7/27/2003	3	32	610	16	3.1	3.1
Arrowhead	8/31/2003	1	19	370	5	5	5
Arrowhead	8/31/2003	2	20	290	6	5.5	5.5
Arrowhead	8/31/2003	3	20	520	5	5	5
Arrowhead	9/30/2003	1	30	580	17	3	3
Arrowhead	9/30/2003	2	32	440	16	3.1	3.1
Arrowhead	9/30/2003	3	31	560	24	3	3
Arrowhead	10/31/2003	1	34	680	34	1.5	1.5
Arrowhead	10/31/2003	2	37	730	37	1.4	1.4

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Arrowhead	10/31/2003	3	39	620	36	1.5	1.5
Arrowhead	11/30/2003	1	40	680	34	2	2
Arrowhead	11/30/2003	2	46	690	33	2	2
Arrowhead	11/30/2003	3	43	690	33	2	2
Arrowhead	12/31/2003	1	48	840	33	1.2	1.2
Arrowhead	12/31/2003	2	55	980	40	1.2	1.2
Arrowhead	12/31/2003	3	53	900	40	1.2	1.2
Arrowhead-algae	12/21/1997	1	.	.	558	.	.
Blue Heron	2/27/1993	1	91	620	31	2.5	2.5
Blue Heron	2/27/1993	2	98	620	27	3	3
Blue Heron	2/27/1993	3	90	600	26	3	3
Blue Heron	3/21/1993	1	55	500	9	3.5	3.5
Blue Heron	3/21/1993	2	53	480	7	4	4
Blue Heron	3/21/1993	3	60	500	8	4.5	4.5
Blue Heron	4/19/1993	1	25	450	4	.	Bottom(5.3)
Blue Heron	4/19/1993	2	22	450	3	.	Bottom(5.0)
Blue Heron	4/19/1993	3	24	380	4	.	Bottom(4.8)
Blue Heron	5/16/1993	1	15	430	4	.	Bottom(5.0)
Blue Heron	5/16/1993	2	23	400	5	.	Bottom(4.8)
Blue Heron	5/16/1993	3	21	420	3	5	5
Blue Heron	6/3/1993	1	25	570	12	1.5	1.5
Blue Heron	6/3/1993	2	33	620	12	1.5	1.5
Blue Heron	6/3/1993	3	20	640	11	1.5	1.5
Blue Heron	6/20/1993	1	36	1820	72	1.5	1.5
Blue Heron	6/20/1993	2	40	1650	81	1.5	1.5
Blue Heron	6/20/1993	3	36	1480	56	1.5	1.5
Blue Heron	7/18/1993	1	36	750	45	4.5	4.5
Blue Heron	7/18/1993	2	36	710	36	4	4
Blue Heron	7/18/1993	3	33	690	29	3.5	3.5
Blue Heron	8/25/1993	1	62	990	91	2	2
Blue Heron	8/25/1993	2	67	990	94	2	2
Blue Heron	8/25/1993	3	77	1030	116	1.8	1.8
Blue Heron	9/19/1993	1	62	1480	89	1.5	1.5
Blue Heron	9/19/1993	2	74	1590	96	1.5	1.5
Blue Heron	9/19/1993	3	68	1570	114	1.5	1.5
Blue Heron	10/18/1993	1	96	1850	115	1.5	1.5
Blue Heron	10/18/1993	2	139	2070	240	1.5	1.5
Blue Heron	10/18/1993	3	111	1940	155	1.3	1.3
Blue Heron	11/15/1993	1	48	880	37	3.3	3.3
Blue Heron	11/15/1993	2	86	880	33	3.3	3.3
Blue Heron	11/15/1993	3	58	920	34	3.3	3.3
Blue Heron	1/16/1994	1	54	1580	11	4.3	4.3
Blue Heron	1/16/1994	2	63	1580	10	3.3	3.3
Blue Heron	1/16/1994	3	63	1590	9	3.3	3.3
Blue Heron	2/23/1994	1	43	910	8	4.5	4.5
Blue Heron	2/23/1994	2	47	910	8	4.5	4.5
Blue Heron	2/23/1994	3	52	910	9	4	4
Blue Heron	3/20/1994	1	37	480	9	4.5	4.5
Blue Heron	3/20/1994	2	43	470	7	4.5	4.5
Blue Heron	3/20/1994	3	43	560	9	4.5	4.5
Blue Heron	4/24/1994	1	33	500	7	4.5	4.5
Blue Heron	4/24/1994	2	34	480	6	4.3	4.3
Blue Heron	4/24/1994	3	31	430	7	4.3	4.3
Blue Heron	5/22/1994	1	32	430	6	5	5
Blue Heron	5/22/1994	2	30	420	6	4.5	4.5
Blue Heron	5/22/1994	3	31	400	6	4	4
Blue Heron	6/30/1994	1	24	410	6	5	5
Blue Heron	6/30/1994	2	27	420	6	.	Bottom(4.5)
Blue Heron	6/30/1994	3	28	480	6	.	Bottom(5.0)
Blue Heron	7/31/1994	1	17	380	8	.	Bottom(5.5)
Blue Heron	7/31/1994	2	21	530	8	.	Bottom(5.5)
Blue Heron	7/31/1994	3	23	550	8	4.5	4.5
Blue Heron	8/21/1994	1	42	500	22	3	3
Blue Heron	8/21/1994	2	39	530	21	3	3
Blue Heron	8/21/1994	3	43	520	20	2.5	2.5
Blue Heron	9/18/1994	1	37	470	22	3.3	3.3
Blue Heron	9/18/1994	2	38	470	21	3.3	3.3
Blue Heron	9/18/1994	3	44	470	26	3	3
Blue Heron	10/31/1994	1	26	270	15	3.5	3.5
Blue Heron	10/31/1994	2	32	280	15	3.5	3.5
Blue Heron	10/31/1994	3	36	300	15	3.5	3.5

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Blue Heron	11/15/1994	1	24	310	10	5	5
Blue Heron	11/15/1994	2	22	300	9	4.5	4.5
Blue Heron	11/15/1994	3	26	330	10	3.5	3.5
Blue Heron	12/18/1994	1	22	310	8	5	5
Blue Heron	12/18/1994	2	25	310	7	5	5
Blue Heron	12/18/1994	3	28	330	10	5	5
Blue Heron	1/22/1995	1	18	310	2	.	Bottom(5.8)
Blue Heron	1/22/1995	2	25	410	3	.	Bottom(5.3)
Blue Heron	1/22/1995	3	15	290	3	.	Bottom(5.3)
Blue Heron	5/29/1995	1	24	640	24	4	4
Blue Heron	5/29/1995	2	24	640	26	4	4
Blue Heron	5/29/1995	3	27	670	29	3.3	3.3
Blue Heron	6/25/1995	1	36	790	14	4.5	4.5
Blue Heron	6/25/1995	2	27	700	12	4.3	4.3
Blue Heron	6/25/1995	3	28	670	14	4.3	4.3
Blue Heron	8/6/1995	1	24	530	8	.	Bottom(5.0)
Blue Heron	8/6/1995	2	25	510	8	.	Bottom(5.0)
Blue Heron	8/6/1995	3	32	640	6	.	Bottom(4.5)
Blue Heron	9/17/1995	1	31	550	11	3.3	3.3
Blue Heron	9/17/1995	2	31	510	11	3.3	3.3
Blue Heron	9/17/1995	3	32	540	12	3.8	3.8
Blue Heron	10/22/1995	1	33	540	9	4	4
Blue Heron	10/22/1995	2	31	700	10	.	Bottom(4.5)
Blue Heron	10/22/1995	3	33	660	9	.	Bottom(4.0)
Blue Heron	11/26/1995	1	22	650	12	.	Bottom(5.0)
Blue Heron	11/26/1995	2	22	610	12	.	Bottom(4.5)
Blue Heron	11/26/1995	3	22	660	12	.	Bottom(4.5)
Blue Heron	2/18/1996	1	27	410	3	.	Bottom(5.3)
Blue Heron	2/18/1996	2	23	400	3	.	Bottom(5.0)
Blue Heron	2/18/1996	3	33	440	2	.	Bottom(4.5)
Blue Heron	4/14/1996	1	37	490	1	.	Bottom(4.7)
Blue Heron	4/14/1996	2	.	.	1	.	Bottom(5.0)
Blue Heron	4/14/1996	3	33	350	1	.	Bottom(4.8)
Blue Heron	6/29/1996	1	35	820	14	3.3	3.3
Blue Heron	6/29/1996	2	33	890	15	3.8	3.8
Blue Heron	6/29/1996	3	38	940	15	3.5	3.5
Blue Heron	7/28/1996	1	39	560	16	3	3
Blue Heron	7/28/1996	2	45	600	18	3.3	3.3
Blue Heron	7/28/1996	3	44	630	19	3.3	3.3
Blue Heron	8/18/1996	1	48	610	14	2.7	2.7
Blue Heron	8/18/1996	2	46	600	11	.	Bottom(2.5)
Blue Heron	8/18/1996	3	.	.	14	2	2
Blue Heron	9/29/1996	1	70	810	39	2	2
Blue Heron	9/29/1996	2	68	760	33	2	2
Blue Heron	9/29/1996	3	71	780	38	1.8	1.8
Blue Heron	10/20/1996	1	76	880	27	1.8	1.8
Blue Heron	10/20/1996	2	77	880	20	1.5	1.5
Blue Heron	10/20/1996	3	76	850	22	1.5	1.5
Blue Heron	12/7/1996	1	62	610	15	1.8	1.8
Blue Heron	12/7/1996	2	65	720	16	1.8	1.8
Blue Heron	12/7/1996	3	82	600	18	.	.
Blue Heron	1/12/1997	1	94	640	24	1.5	1.5
Blue Heron	1/12/1997	2	90	690	23	1.5	1.5
Blue Heron	1/12/1997	3	86	730	22	1.5	1.5
Blue Heron	2/16/1997	1	111	650	17	0.7	0.7
Blue Heron	2/16/1997	2	120	570	17	0.7	0.7
Blue Heron	2/16/1997	3	115	610	16	0.7	0.7
Blue Heron	3/22/1997	1	87	710	38	1.5	1.5
Blue Heron	3/22/1997	2	86	690	18	1.5	1.5
Blue Heron	3/22/1997	3	89	700	22	1.5	1.5
Blue Heron	4/20/1997	1	101	870	18	1.5	1.5
Blue Heron	4/20/1997	2	100	870	18	2	2
Blue Heron	4/20/1997	3	104	880	20	2	2
Blue Heron	5/18/1997	1	52	620	14	3	3
Blue Heron	5/18/1997	2	50	490	13	3	3
Blue Heron	5/18/1997	3	54	630	13	3	3
Blue Heron	6/8/1997	1	36	430	13	3.3	3.3
Blue Heron	6/8/1997	2	33	380	12	4	4
Blue Heron	6/8/1997	3	40	440	16	3	3
Blue Heron	7/13/1997	1	45	520	12	3	3
Blue Heron	7/13/1997	2	37	350	11	3.5	3.5

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Blue Heron	7/13/1997	3	.	.	10	3.5	3.5
Blue Heron	8/26/1997	1	42	890	23	3.3	3.3
Blue Heron	8/26/1997	2	37	830	23	3	3
Blue Heron	8/26/1997	3	38	770	26	3	3
Blue Heron	9/28/1997	1	55	860	40	2	2
Blue Heron	9/28/1997	2	55	850	40	2	2
Blue Heron	9/28/1997	3	61	910	43	2	2
Blue Heron	11/16/1997	1	62	550	28	2.3	2.3
Blue Heron	11/16/1997	2	66	560	19	2.5	2.5
Blue Heron	11/16/1997	3	62	530	20	2	2
Blue Heron	12/14/1997	1	46	550	.	3.3	3.3
Blue Heron	12/14/1997	2	45	720	.	3.3	3.3
Blue Heron	12/14/1997	3	49	800	.	3.3	3.3
Blue Heron	1/18/1998	1	66	640	27	2.5	2.5
Blue Heron	1/18/1998	2	57	550	23	2.5	2.5
Blue Heron	1/18/1998	3	50	660	23	2.5	2.5
Blue Heron	2/28/1998	1	45	630	19	2	2
Blue Heron	2/28/1998	2	46	560	22	2.5	2.5
Blue Heron	2/28/1998	3	37	560	21	2.5	2.5
Blue Heron	3/29/1998	1	31	330	7	4	4
Blue Heron	3/29/1998	2	30	350	5	.	Bottom(4.5)
Blue Heron	3/29/1998	3	32	330	5	.	Bottom(4.5)
Blue Heron	4/26/1998	1	26	340	7	.	Bottom(5.0)
Blue Heron	4/26/1998	2	27	340	6	.	Bottom(4.5)
Blue Heron	4/26/1998	3	28	410	7	.	Bottom(4.0)
Blue Heron	5/17/1998	1	34	530	13	3	3
Blue Heron	5/17/1998	2	26	510	12	3	3
Blue Heron	5/17/1998	3	36	350	12	3	3
Blue Heron	6/14/1998	1	43	760	22	2	2
Blue Heron	6/14/1998	2	43	700	20	2	2
Blue Heron	6/14/1998	3	41	690	17	2	2
Blue Heron	7/11/1998	1	34	650	8	3	3
Blue Heron	7/11/1998	2	37	700	11	2.8	2.8
Blue Heron	7/11/1998	3	34	670	9	.	Bottom(3.0)
Blue Heron	8/16/1998	1	57	750	31	2.8	2.8
Blue Heron	8/16/1998	2	54	810	35	2.8	2.8
Blue Heron	8/16/1998	3	54	800	27	2.5	2.5
Blue Heron	9/19/1998	1	42	620	24	3	3
Blue Heron	9/19/1998	2	61	650	30	3	3
Blue Heron	9/19/1998	3	54	610	31	3	3
Blue Heron	10/10/1998	1	58	900	65	2	2
Blue Heron	10/10/1998	2	57	820	55	2	2
Blue Heron	10/10/1998	3	49	790	57	2.5	2.5
Blue Heron	11/22/1998	1	64	1240	96	1.5	1.5
Blue Heron	11/22/1998	2	62	1190	83	1.5	1.5
Blue Heron	11/22/1998	3	75	1130	177	1.5	1.5
Blue Heron	12/13/1998	1	63	1120	67	2	2
Blue Heron	12/13/1998	2	58	1080	48	2	2
Blue Heron	12/13/1998	3	61	1180	64	2	2
Blue Heron	1/17/1999	1	42	680	24	3	3
Blue Heron	1/17/1999	2	42	660	21	3	3
Blue Heron	1/17/1999	3	42	540	30	3	3
Blue Heron	2/21/1999	1	50	740	35	2	2
Blue Heron	2/21/1999	2	53	790	38	2.5	2.5
Blue Heron	2/21/1999	3	53	790	34	2.5	2.5
Blue Heron	3/21/1999	1	89	860	33	2	2
Blue Heron	3/21/1999	2	88	790	36	2	2
Blue Heron	3/21/1999	3	88	790	38	2	2
Blue Heron	4/18/1999	1	72	730	30	2.5	2.5
Blue Heron	4/18/1999	2	67	780	33	2.5	2.5
Blue Heron	4/18/1999	3	66	730	24	2.5	2.5
Blue Heron	5/9/1999	1	78	1240	62	1.5	1.5
Blue Heron	5/9/1999	2	83	1150	66	1.5	1.5
Blue Heron	5/9/1999	3	86	1210	29	1.5	1.5
Blue Heron	6/13/1999	1	68	1770	100	1	1
Blue Heron	6/13/1999	2	70	1670	93	1	1
Blue Heron	6/13/1999	3	75	1870	116	1	1
Blue Heron	7/25/1999	1	64	1140	44	2	2
Blue Heron	7/25/1999	2	59	990	28	2.5	2.5
Blue Heron	7/25/1999	3	69	1040	31	2.3	2.3
Blue Heron	8/22/1999	1	66	980	52	2.8	2.8

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Blue Heron	8/22/1999	2	60	980	36	2.8	2.8
Blue Heron	8/22/1999	3	54	900	26	2.8	2.8
Blue Heron	9/26/1999	1	62	740	39	2.5	2.5
Blue Heron	9/26/1999	2	69	920	48	2.5	2.5
Blue Heron	9/26/1999	3	72	690	87	2.5	2.5
Blue Heron	10/18/1999	1	63	750	38	3	3
Blue Heron	10/18/1999	2	65	770	39	3	3
Blue Heron	10/18/1999	3	69	830	72	3	3
Blue Heron	11/13/1999	1	63	700	34	2.5	2.5
Blue Heron	11/13/1999	2	63	740	41	2.5	2.5
Blue Heron	11/13/1999	3	65	700	40	2.5	2.5
Blue Heron	12/26/1999	1	48	550	24	3	3
Blue Heron	12/26/1999	2	50	660	20	3	3
Blue Heron	12/26/1999	3	50	630	20	3	3
Blue Heron	1/22/2000	1	57	790	29	1.8	1.8
Blue Heron	1/22/2000	2	55	730	37	.	.
Blue Heron	1/22/2000	3	53	710	52	.	.
Blue Heron	2/20/2000	1	62	720	25	2.8	2.8
Blue Heron	2/20/2000	2	74	920	23	2.8	2.8
Blue Heron	2/20/2000	3	58	750	15	2.8	2.8
Blue Heron	3/25/2000	1	38	570	19	3.3	3.3
Blue Heron	3/25/2000	2	39	640	17	3.3	3.3
Blue Heron	3/25/2000	3	32	570	18	3.3	3.3
Blue Heron	4/22/2000	1	55	740	26	2.5	2.5
Blue Heron	4/22/2000	2	54	660	29	2.5	2.5
Blue Heron	4/22/2000	3	56	690	28	2.5	2.5
Blue Heron	5/14/2000	1	55	980	64	1.8	1.8
Blue Heron	5/14/2000	2	57	1000	66	1.5	1.5
Blue Heron	5/14/2000	3	52	990	67	1.5	1.5
Blue Heron	6/17/2000	1	75	1040	45	2	2
Blue Heron	6/17/2000	2	75	1050	46	2	2
Blue Heron	6/17/2000	3	84	1110	46	2	2
Blue Heron	7/23/2000	1	80	2050	74	2	2
Blue Heron	7/23/2000	2	74	2060	64	2	2
Blue Heron	7/23/2000	3	72	2090	49	2	2
Blue Heron	8/13/2000	1	62	850	63	2.5	2.5
Blue Heron	8/13/2000	2	62	790	48	2.5	2.5
Blue Heron	8/13/2000	3	61	940	58	2.5	2.5
Blue Heron	9/30/2000	1	50	880	35	2.8	2.8
Blue Heron	9/30/2000	2	49	960	34	2.8	2.8
Blue Heron	9/30/2000	3	41	910	35	2.8	2.8
Blue Heron	10/22/2000	1	49	820	29	2.3	2.3
Blue Heron	10/22/2000	2	50	850	29	2.3	2.3
Blue Heron	10/22/2000	3	59	850	46	2.3	2.3
Blue Heron	11/26/2000	1	42	660	17	4	4
Blue Heron	11/26/2000	2	39	600	13	4	4
Blue Heron	11/26/2000	3	38	640	13	.	Bottom(4.0)
Blue Heron	12/23/2000	1	27	550	16	3	3
Blue Heron	12/23/2000	2	40	640	17	3	3
Blue Heron	12/23/2000	3	40	710	17	2.5	2.5
Blue Heron	1/27/2001	1	56	850	19	2.8	2.8
Blue Heron	1/27/2001	2	48	720	16	2.8	2.8
Blue Heron	1/27/2001	3	53	700	17	2.8	2.8
Blue Heron	2/18/2001	1	41	690	10	3.5	3.5
Blue Heron	2/18/2001	2	36	740	8	3.5	3.5
Blue Heron	2/18/2001	3	38	720	10	3.5	3.5
Blue Heron	3/24/2001	1	38	550	9	4.5	4.5
Blue Heron	3/24/2001	2	40	540	8	.	Bottom(4.5)
Blue Heron	3/24/2001	3	34	440	6	.	Bottom(4.3)
Blue Heron	4/15/2001	1	29	490	10	5	5
Blue Heron	4/15/2001	2	27	490	6	.	Bottom(4.5)
Blue Heron	4/15/2001	3	29	510	7	.	Bottom(4.0)
Blue Heron	5/26/2001	1	37	600	13	3	3
Blue Heron	5/26/2001	2	39	640	12	3	3
Blue Heron	5/26/2001	3	38	620	11	3	3
Blue Heron	6/30/2001	1	26	540	11	4.5	4.5
Blue Heron	6/30/2001	2	26	410	10	.	Bottom(4.5)
Blue Heron	6/30/2001	3	25	370	8	.	Bottom(4.0)
Blue Heron	7/22/2001	1	26	480	9	3.5	3.5
Blue Heron	7/22/2001	2	30	560	10	3.5	3.5
Blue Heron	7/22/2001	3	33	520	10	3.5	3.5

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Blue Heron	8/19/2001	1	29	370	12	4	4
Blue Heron	8/19/2001	2	31	410	11	4	4
Blue Heron	8/19/2001	3	27	390	11	.	Bottom(4.0)
Blue Heron	9/23/2001	1	37	460	15	3	3
Blue Heron	9/23/2001	2	36	480	12	3	3
Blue Heron	9/23/2001	3	34	450	9	3	3
Blue Heron	10/21/2001	1	41	560	12	3	3
Blue Heron	10/21/2001	2	37	460	10	3	3
Blue Heron	10/21/2001	3	41	500	11	.	.
Blue Heron	11/18/2001	1	46	660	13	2.3	2.3
Blue Heron	11/18/2001	2	46	570	15	2.5	2.5
Blue Heron	11/18/2001	3	45	600	13	2.8	2.8
Blue Heron	12/24/2001	1	47	640	16	2	2
Blue Heron	12/24/2001	2	49	640	17	2.3	2.3
Blue Heron	12/24/2001	3	49	560	18	2.3	2.3
Blue Heron	1/27/2002	1	50	620	18	2.5	2.5
Blue Heron	1/27/2002	2	50	530	16	2.3	2.3
Blue Heron	1/27/2002	3	49	570	15	2.5	2.5
Blue Heron	2/16/2002	1	28	350	7	3.8	3.8
Blue Heron	2/16/2002	2	35	400	8	3	3
Blue Heron	2/16/2002	3	34	410	8	3	3
Blue Heron	3/16/2002	1	25	300	5	4.5	4.5
Blue Heron	3/16/2002	2	26	270	5	.	Bottom(4.5)
Blue Heron	3/16/2002	3	27	270	5	.	Bottom(4.0)
Blue Heron	4/27/2002	1	32	580	5	3.3	3.3
Blue Heron	4/27/2002	2	38	500	8	3.3	3.3
Blue Heron	4/27/2002	3	37	400	4	3.4	3.4
Blue Heron	5/25/2002	1	57	660	9	3.5	3.5
Blue Heron	5/25/2002	2	55	580	9	3.5	3.5
Blue Heron	5/25/2002	3	65	540	9	2.8	2.8
Blue Heron	6/22/2002	1	36	530	8	4	4
Blue Heron	6/22/2002	2	37	620	8	4	4
Blue Heron	6/22/2002	3	38	520	5	3.5	3.5
Blue Heron	7/13/2002	1	36	590	11	4.3	4.3
Blue Heron	7/13/2002	2	32	660	10	.	Bottom(4.2)
Blue Heron	7/13/2002	3	40	580	9	3.3	3.3
Blue Heron	8/10/2002	1	42	650	12	4.5	4.5
Blue Heron	8/10/2002	2	39	530	19	.	Bottom(4.3)
Blue Heron	8/10/2002	3	46	570	19	.	Bottom(3.8)
Blue Heron	9/22/2002	1	42	580	26	4.1	4.1
Blue Heron	9/22/2002	2	43	550	24	4.3	4.3
Blue Heron	9/22/2002	3	58	620	73	3.3	3.3
Blue Heron	10/27/2002	1	40	520	21	2.5	2.5
Blue Heron	10/27/2002	2	46	560	29	2.5	2.5
Blue Heron	10/27/2002	3	48	560	27	2.5	2.5
Blue Heron	11/17/2002	1	44	530	23	2.5	2.5
Blue Heron	11/17/2002	2	50	540	41	2.5	2.5
Blue Heron	11/17/2002	3	52	510	41	2	2
Blue Heron	12/15/2002	1	35	310	12	3	3
Blue Heron	12/15/2002	2	37	310	12	2.7	2.7
Blue Heron	12/15/2002	3	42	320	9	2.5	2.5
Blue Heron	1/19/2003	1	37	650	18	2.5	2.5
Blue Heron	1/19/2003	2	38	620	17	2.5	2.5
Blue Heron	1/19/2003	3	37	580	15	2.5	2.5
Blue Heron	2/15/2003	1	46	1150	63	1.4	1.4
Blue Heron	2/15/2003	2	46	980	65	1.5	1.5
Blue Heron	2/15/2003	3	48	1110	64	1.5	1.5
Blue Heron	3/22/2003	1	47	970	75	1.5	1.5
Blue Heron	3/22/2003	2	43	960	74	1.5	1.5
Blue Heron	3/22/2003	3	45	920	67	1.5	1.5
Blue Heron	4/20/2003	1	36	470	16	.	.
Blue Heron	4/20/2003	2	33	590	15	3	3
Blue Heron	4/20/2003	3	35	530	14	2.5	2.5
Blue Heron	5/18/2003	1	35	550	16	3.3	3.3
Blue Heron	5/18/2003	2	37	560	17	3.3	3.3
Blue Heron	5/18/2003	3	38	520	14	2.7	2.7
Blue Heron	6/15/2003	1	41	560	13	3.3	3.3
Blue Heron	6/15/2003	2	39	590	15	3.3	3.3
Blue Heron	6/15/2003	3	41	590	13	3.3	3.3
Blue Heron	7/20/2003	1	38	560	14	2.8	2.8
Blue Heron	7/20/2003	2	43	510	13	2.5	2.5

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Blue Heron	7/20/2003	3	41	520	14	2.5	2.5
Blue Heron	8/16/2003	1	28	460	12	4.2	4.2
Blue Heron	8/16/2003	2	41	510	15	2.7	2.7
Blue Heron	8/16/2003	3	45	430	11	1.6	1.6
Blue Heron	9/7/2003	1	32	380	15	3.6	3.6
Blue Heron	9/7/2003	2	36	530	16	3.6	3.6
Blue Heron	9/7/2003	3	36	500	14	3.6	3.6
Blue Heron	10/12/2003	1	41	590	18	2.8	2.8
Blue Heron	10/12/2003	2	41	620	18	2.8	2.8
Blue Heron	10/12/2003	3	45	660	18	2.3	2.3
Blue Heron	11/23/2003	1	37	560	15	2.7	2.7
Blue Heron	11/23/2003	2	41	550	12	3	3
Blue Heron	11/23/2003	3	54	600	14	2.7	2.7
Blue Heron	12/14/2003	1	40	590	4	.	Bottom(5.5)
Blue Heron	12/14/2003	2	38	520	4	.	Bottom(4.5)
Blue Heron	12/14/2003	3	43	500	5	.	Bottom(4.0)
Diane	2/23/1993	1	14	300	3	5.8	5.8
Diane	2/23/1993	2	13	330	2	6.5	6.5
Diane	2/23/1993	3	14	280	2	6	6
Diane	3/20/1993	1	23	250	2	6.3	6.3
Diane	3/20/1993	2	21	330	2	5.5	5.5
Diane	3/20/1993	3	24	310	1	6.5	6.5
Diane	4/17/1993	1	13	320	1	.	Bottom(10.3)
Diane	4/17/1993	2	13	330	1	13	13
Diane	4/17/1993	3	10	270	1	.	Bottom(9.0)
Diane	5/16/1993	1	7	300	1	.	Bottom(9.0)
Diane	5/16/1993	2	7	270	1	12.3	12.3
Diane	5/16/1993	3	6	300	1	.	Bottom(8.5)
Diane	6/9/1993	1	11	200	2	.	Bottom(9.0)
Diane	6/9/1993	2	10	230	2	11.3	11.3
Diane	6/9/1993	3	10	240	2	.	Bottom(9.8)
Diane	7/8/1993	1	6	280	1	.	.
Diane	7/8/1993	2	9	270	2	.	.
Diane	7/8/1993	3	7	280	2	.	.
Diane	7/17/1993	1	9	290	3	8	8
Diane	7/17/1993	2	9	330	3	9.3	9.3
Diane	7/17/1993	3	8	290	3	.	Bottom(8.2)
Diane	8/15/1993	1	10	360	3	7	7
Diane	8/15/1993	2	9	350	4	7	7
Diane	8/15/1993	3	12	340	3	7.8	7.8
Diane	9/12/1993	1	21	370	6	6.5	6.5
Diane	9/12/1993	2	18	350	5	6.5	6.5
Diane	9/12/1993	3	15	310	4	6.3	6.3
Diane	10/23/1993	1	15	340	3	5.5	5.5
Diane	10/23/1993	2	14	290	3	6	6
Diane	10/23/1993	3	15	350	2	5.5	5.5
Diane	11/11/1993	1	19	350	2	7.3	7.3
Diane	11/11/1993	2	17	300	2	7.3	7.3
Diane	11/11/1993	3	17	330	2	7.5	7.5
Diane	12/18/1993	1	15	310	6	6.8	6.8
Diane	12/18/1993	2	15	300	5	7.5	7.5
Diane	12/18/1993	3	19	320	4	7.3	7.3
Diane	1/20/1994	1	21	230	3	6	6
Diane	1/20/1994	2	23	250	3	6	6
Diane	1/20/1994	3	21	300	3	6	6
Diane	2/12/1994	1	22	370	3	6.2	6.2
Diane	2/12/1994	2	18	260	3	6	6
Diane	2/12/1994	3	18	330	3	7	7
Diane	3/11/1994	1	26	320	6	4	4
Diane	3/11/1994	2	27	310	6	4	4
Diane	3/11/1994	3	28	290	5	4	4
Diane	4/13/1994	1	24	350	7	6.3	6.3
Diane	4/13/1994	2	24	340	7	6.3	6.3
Diane	4/13/1994	3	24	350	6	6.5	6.5
Diane	5/14/1994	1	13	360	4	6.5	6.5
Diane	5/14/1994	2	19	400	6	6.5	6.5
Diane	5/14/1994	3	18	450	4	6.5	6.5
Diane	6/19/1994	1	10	340	9	6.3	6.3
Diane	6/19/1994	2	10	390	9	6	6
Diane	6/19/1994	3	11	350	8	6	6
Diane	7/18/1994	1	17	470	9	5	5

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Diane	7/18/1994	2	17	440	11	5	5
Diane	7/18/1994	3	16	480	9	5	5
Diane	8/14/1994	1	19	540	16	5	5
Diane	8/14/1994	2	22	650	17	4	4
Diane	8/14/1994	3	19	510	12	5	5
Diane	9/17/1994	1	16	450	13	5.3	5.3
Diane	9/17/1994	2	22	460	10	4.8	4.8
Diane	9/17/1994	3	22	440	.	5.5	5.5
Diane	10/8/1994	1	25	330	12	3	3
Diane	10/8/1994	2	19	440	11	3	3
Diane	10/8/1994	3	24	340	13	3	3
Diane	11/14/1994	1	14	290	7	5.5	5.5
Diane	11/14/1994	2	14	270	7	5.5	5.5
Diane	11/14/1994	3	15	290	7	5.5	5.5
Diane	12/17/1994	1	18	280	6	4.3	4.3
Diane	12/17/1994	2	21	290	7	4.8	4.8
Diane	12/17/1994	3	18	280	7	4.3	4.3
Diane	1/16/1995	1	17	290	10	5.3	5.3
Diane	1/16/1995	2	18	280	10	5.5	5.5
Diane	1/16/1995	3	16	280	7	5.5	5.5
Diane	2/25/1995	1	18	240	7	4.3	4.3
Diane	2/25/1995	2	17	260	6	4.5	4.5
Diane	2/25/1995	3	16	240	6	5	5
Diane	3/18/1995	1	17	280	5	6.5	6.5
Diane	3/18/1995	2	17	260	5	5.8	5.8
Diane	3/18/1995	3	18	390	5	6	6
Diane	4/22/1995	1	14	360	6	6	6
Diane	4/22/1995	2	12	330	4	8	8
Diane	4/22/1995	3	10	320	4	8.3	8.3
Diane	5/8/1995	1	13	300	3	6.8	6.8
Diane	5/8/1995	2	13	280	3	6.3	6.3
Diane	5/8/1995	3	12	280	4	6.3	6.3
Diane	5/10/1995	1	18	310	5	6.3	6.3
Diane	5/10/1995	2	15	300	5	6.3	6.3
Diane	5/10/1995	3	16	280	4	6	6
Diane	9/29/1995	1	13	260	7	7.5	7.5
Diane	9/29/1995	2	15	360	8	7	7
Diane	9/29/1995	3	13	340	7	7	7
Diane	10/16/1995	1	17	330	6	4.5	4.5
Diane	10/16/1995	2	15	330	6	5	5
Diane	10/16/1995	3	16	330	7	5	5
Diane	12/16/1995	1	14	280	3	7	7
Diane	12/16/1995	2	21	280	3	6.8	6.8
Diane	12/16/1995	3	13	280	3	5.8	5.8
Diane	1/23/1996	1	26	340	6	3.3	3.3
Diane	1/23/1996	2	25	330	6	3.3	3.3
Diane	1/23/1996	3	23	350	5	3.3	3.3
Diane	2/18/1996	1	29	330	5	2.8	2.8
Diane	2/18/1996	2	31	310	6	2.8	2.8
Diane	2/18/1996	3	26	330	5	2.3	2.3
Diane	3/27/1996	1	35	290	6	2.5	2.5
Diane	3/27/1996	2	46	470	10	2.3	2.3
Diane	3/27/1996	3	37	370	7	2.3	2.3
Diane	4/13/1996	1	31	390	4	2.8	2.8
Diane	4/13/1996	2	28	330	5	2.5	2.5
Diane	4/13/1996	3	27	290	5	2	2
Diane	5/17/1996	1	12	270	3	5	5
Diane	5/17/1996	2	14	240	4	5	5
Diane	5/17/1996	3	12	260	3	5	5
Diane	6/15/1996	1	11	370	5	6.3	6.3
Diane	6/15/1996	2	13	340	5	5.5	5.5
Diane	6/15/1996	3	12	390	4	5.5	5.5
Diane	7/11/1996	1	18	340	12	4.3	4.3
Diane	7/11/1996	2	19	390	11	4	4
Diane	7/11/1996	3	18	360	11	4	4
Diane	8/11/1996	1	18	420	9	5	5
Diane	8/11/1996	2	19	380	10	5.3	5.3
Diane	8/11/1996	3	18	520	8	5	5
Diane	9/23/1996	1	38	1080	27	2	2
Diane	9/23/1996	2	41	970	26	2	2
Diane	9/23/1996	3	40	1000	26	2	2

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Diane	10/14/1996	1	62	800	24	0.8	0.8
Diane	10/14/1996	2	59	840	23	1	1
Diane	10/14/1996	3	57	820	23	1	1
Diane	11/21/1996	1	41	830	18	1.5	1.5
Diane	11/21/1996	2	44	840	18	1.8	1.8
Diane	11/21/1996	3	46	810	20	1.8	1.8
Diane	12/11/1996	1	62	750	19	1.5	1.5
Diane	12/11/1996	2	55	800	21	1.3	1.3
Diane	12/11/1996	3	56	850	20	1.3	1.3
Diane	2/26/1997	1	67	710	20	1	1
Diane	2/26/1997	2	67	690	22	1	1
Diane	2/26/1997	3	63	670	23	1	1
Diane	3/15/1997	1	61	660	13	1.8	1.8
Diane	3/15/1997	2	58	610	15	1.8	1.8
Diane	3/15/1997	3	60	690	16	1.5	1.5
Diane	4/21/1997	1	62	890	22	1.8	1.8
Diane	4/21/1997	2	57	860	23	1.8	1.8
Diane	4/21/1997	3	61	910	23	2	2
Diane	5/16/1997	1	42	890	6	5	5
Diane	5/16/1997	2	43	920	6	5	5
Diane	5/16/1997	3	47	860	5	5	5
Diane	6/11/1997	1	24	570	10	3.8	3.8
Diane	6/11/1997	2	23	670	10	4.3	4.3
Diane	6/11/1997	3	27	580	11	3.8	3.8
Diane	7/12/1997	1	18	440	7	5	5
Diane	7/12/1997	2	18	410	6	5.5	5.5
Diane	7/12/1997	3	18	410	6	6	6
Diane	8/11/1997	1	25	400	13	3.3	3.3
Diane	8/11/1997	2	19	360	15	3.5	3.5
Diane	8/11/1997	3	19	410	14	3.3	3.3
Diane	9/17/1997	1	23	590	18	4	4
Diane	9/17/1997	2	20	500	14	4	4
Diane	9/17/1997	3	22	490	18	3.5	3.5
Diane	10/15/1997	1	27	690	36	3	3
Diane	10/15/1997	2	30	630	28	3	3
Diane	10/15/1997	3	26	550	31	3	3
Diane	11/12/1997	1	31	530	17	3	3
Diane	11/12/1997	2	30	500	25	3	3
Diane	11/12/1997	3	31	530	24	3	3
Diane	12/29/1997	1	26	250	7	3	3
Diane	12/29/1997	2	27	390	7	3	3
Diane	12/29/1997	3	26	240	10	3	3
Diane	1/17/1998	1	28	500	18	3	3
Diane	1/17/1998	2	32	390	20	3	3
Diane	1/17/1998	3	25	300	19	3	3
Diane	2/14/1998	1	28	350	16	3	3
Diane	2/14/1998	2	28	260	16	3	3
Diane	2/14/1998	3	28	300	13	2.5	2.5
Diane	3/25/1998	1	22	290	5	4	4
Diane	3/25/1998	2	23	310	5	4	4
Diane	3/25/1998	3	21	230	4	4.3	4.3
Diane	4/22/1998	1	13	300	5	6.3	6.3
Diane	4/22/1998	2	15	330	5	6.3	6.3
Diane	4/22/1998	3	15	300	6	6.5	6.5
Diane	5/12/1998	1	17	500	5	5	5
Diane	5/12/1998	2	15	240	5	5	5
Diane	5/12/1998	3	18	360	5	5	5
Diane	6/20/1998	1	14	280	6	4.3	4.3
Diane	6/20/1998	2	15	300	7	4.8	4.8
Diane	6/20/1998	3	16	340	7	4.8	4.8
Diane	7/8/1998	1	16	360	8	4.5	4.5
Diane	7/8/1998	2	15	370	9	4.5	4.5
Diane	7/8/1998	3	16	330	8	4.5	4.5
Diane	8/20/1998	1	26	510	27	3.5	3.5
Diane	8/20/1998	2	23	500	24	3.5	3.5
Diane	8/20/1998	3	24	400	23	3.5	3.5
Diane	9/14/1998	1	24	390	9	4.5	4.5
Diane	9/14/1998	2	23	400	13	4.5	4.5
Diane	9/14/1998	3	22	400	9	4.5	4.5
Diane	10/24/1998	1	23	440	17	3	3
Diane	10/24/1998	2	23	430	13	3.5	3.5

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Diane	10/24/1998	3	21	460	14	3	3
Diane	11/17/1998	1	23	400	11	3.8	3.8
Diane	11/17/1998	2	22	560	9	3.8	3.8
Diane	11/17/1998	3	19	340	9	3.8	3.8
Diane	12/19/1998	1	20	390	8	4	4
Diane	12/19/1998	2	16	380	8	4	4
Diane	12/19/1998	3	20	350	8	4.5	4.5
Diane	1/19/1999	1	22	370	5	3.5	3.5
Diane	1/19/1999	2	22	340	5	3.8	3.8
Diane	1/19/1999	3	22	340	4	3.8	3.8
Diane	2/12/1999	1	21	350	8	4	4
Diane	2/12/1999	2	23	350	8	4	4
Diane	2/12/1999	3	22	350	7	3.8	3.8
Diane	3/20/1999	1	32	450	8	3.5	3.5
Diane	3/20/1999	2	32	450	6	3.5	3.5
Diane	3/20/1999	3	32	440	6	3.5	3.5
Diane	4/19/1999	1	30	410	8	3.5	3.5
Diane	4/19/1999	2	35	430	9	3.5	3.5
Diane	4/19/1999	3	29	410	8	3.5	3.5
Diane	5/28/1999	1	21	510	7	4	4
Diane	5/28/1999	2	19	550	7	4.3	4.3
Diane	5/28/1999	3	20	380	7	4	4
Diane	6/7/1999	1	21	440	8	4	4
Diane	6/7/1999	2	21	420	9	4	4
Diane	6/7/1999	3	20	410	8	4	4
Diane	7/14/1999	1	20	580	10	3.5	3.5
Diane	7/14/1999	2	25	560	10	3.5	3.5
Diane	7/14/1999	3	27	540	8	3.5	3.5
Diane	8/31/1999	1	18	400	9	4.5	4.5
Diane	8/31/1999	2	21	400	11	4.5	4.5
Diane	8/31/1999	3	20	420	8	4.8	4.8
Diane	9/22/1999	1	24	420	9	4	4
Diane	9/22/1999	2	27	430	10	4	4
Diane	9/22/1999	3	23	400	11	4	4
Diane	10/11/1999	1	23	410	8	4.5	4.5
Diane	10/11/1999	2	19	430	8	4.5	4.5
Diane	10/11/1999	3	22	440	10	4.5	4.5
Diane	11/19/1999	1	25	590	5	4	4
Diane	11/19/1999	2	24	540	5	4	4
Diane	11/19/1999	3	23	540	5	4	4
Diane	12/17/1999	1	22	630	9	3.5	3.5
Diane	12/17/1999	2	22	620	11	3.8	3.8
Diane	12/17/1999	3	23	640	.	4	4
Diane	1/21/2000	1	28	630	5	3	3
Diane	1/21/2000	2	26	670	6	3	3
Diane	1/21/2000	3	25	680	7	3	3
Diane	2/18/2000	1	25	570	15	3.5	3.5
Diane	2/18/2000	2	29	640	17	3.5	3.5
Diane	2/18/2000	3	22	600	17	3.5	3.5
Diane	3/17/2000	1	28	370	14	4	4
Diane	3/17/2000	2	27	570	13	4	4
Diane	3/17/2000	3	28	540	14	3.5	3.5
Diane	4/8/2000	1	22	490	5	6	6
Diane	4/8/2000	2	24	460	5	5.5	5.5
Diane	4/8/2000	3	25	620	6	5.5	5.5
Diane	5/13/2000	1	18	450	5	6.5	6.5
Diane	5/13/2000	2	17	500	5	6	6
Diane	5/13/2000	3	18	350	5	5.8	5.8
Diane	6/14/2000	1	21	530	12	4	4
Diane	6/14/2000	2	22	540	12	4	4
Diane	6/14/2000	3	20	550	11	4	4
Diane	7/10/2000	1	22	640	11	4.3	4.3
Diane	7/10/2000	2	21	650	9	4.3	4.3
Diane	7/10/2000	3	20	700	10	4	4
Diane	8/21/2000	1	19	520	12	4.5	4.5
Diane	8/21/2000	2	19	420	11	4.5	4.5
Diane	8/21/2000	3	18	420	12	4.5	4.5
Diane	9/25/2000	1	21	420	8	4.5	4.5
Diane	9/25/2000	2	21	440	8	4.8	4.8
Diane	9/25/2000	3	24	440	9	4.3	4.3
Diane	10/23/2000	1	21	610	9	4.5	4.5

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Diane	10/23/2000	2	19	610	7	4.5	4.5
Diane	10/23/2000	3	19	450	8	4.5	4.5
Diane	11/16/2000	1	16	510	5	4.5	4.5
Diane	11/16/2000	2	18	510	6	5	5
Diane	11/16/2000	3	17	500	6	4.5	4.5
Diane	12/16/2000	1	26	450	3	4.3	4.3
Diane	12/16/2000	2	29	620	4	4.3	4.3
Diane	12/16/2000	3	30	400	4	4.3	4.3
Diane	1/30/2001	1	34	610	14	3	3
Diane	1/30/2001	2	29	420	13	3	3
Diane	1/30/2001	3	36	480	17	3	3
Diane	2/21/2001	1	39	570	6	3.8	3.8
Diane	2/21/2001	2	35	550	7	3.8	3.8
Diane	2/21/2001	3	35	540	6	3.8	3.8
Diane	3/12/2001	1	26	390	4	6	6
Diane	3/12/2001	2	26	390	4	6	6
Diane	3/12/2001	3	28	410	4	6	6
Diane	4/24/2001	1	15	550	3	.	Bottom(10.0)
Diane	4/24/2001	2	15	480	3	13	13
Diane	4/24/2001	3	12	380	3	.	Bottom(8.0)
Diane	5/14/2001	1	10	450	3	8	8
Diane	5/14/2001	2	11	430	3	8	8
Diane	5/14/2001	3	11	490	3	7	7
Diane	6/18/2001	1	21	320	4	4.5	4.5
Diane	6/18/2001	2	17	300	5	4.5	4.5
Diane	6/18/2001	3	21	470	4	4.5	4.5
Diane	7/11/2001	1	15	240	5	7.5	7.5
Diane	7/11/2001	2	15	270	5	7.5	7.5
Diane	7/11/2001	3	20	420	4	7.5	7.5
Diane	8/20/2001	1	14	200	5	6	6
Diane	8/20/2001	2	.	.	5	6	6
Diane	8/20/2001	3	14	210	5	6	6
Diane	9/17/2001	1	12	330	3	6	6
Diane	9/17/2001	2	12	320	3	6	6
Diane	9/17/2001	3	12	320	3	6	6
Diane	10/29/2001	1	18	680	4	6.5	6.5
Diane	10/29/2001	2	23	640	4	6.5	6.5
Diane	10/29/2001	3	18	390	4	6.5	6.5
Diane	11/19/2001	1	17	400	3	6.5	6.5
Diane	11/19/2001	2	19	330	3	6.5	6.5
Diane	11/19/2001	3	17	330	3	7	7
Diane	12/19/2001	1	11	370	7	6	6
Diane	12/19/2001	2	15	380	7	6	6
Diane	12/19/2001	3	15	240	6	5.5	5.5
Diane	1/23/2002	1	22	360	3	6.5	6.5
Diane	1/23/2002	2	20	390	3	6.5	6.5
Diane	1/23/2002	3	20	350	3	6.5	6.5
Diane	2/16/2002	1	20	390	2	5.5	5.5
Diane	2/16/2002	2	20	460	2	5.5	5.5
Diane	2/16/2002	3	22	360	3	5.5	5.5
Diane	3/18/2002	1	22	370	3	4.5	4.5
Diane	3/18/2002	2	21	250	3	4.5	4.5
Diane	3/18/2002	3	24	400	3	4.5	4.5
Diane	4/15/2002	1	15	200	3	8	8
Diane	4/15/2002	2	17	380	3	7.5	7.5
Diane	4/15/2002	3	14	290	3	7.5	7.5
Diane	5/15/2002	1	13	270	3	7.5	7.5
Diane	5/15/2002	2	14	320	3	8	8
Diane	5/15/2002	3	15	260	3	.	Bottom(8.0)
Diane	6/21/2002	1	14	460	4	9	9
Diane	6/21/2002	2	10	400	3	9	9
Diane	6/21/2002	3	17	600	3	.	Bottom(9.0)
Diane	7/15/2002	1	17	440	4	9	9
Diane	7/15/2002	2	12	330	4	9	9
Diane	7/15/2002	3	20	.	4	.	Bottom(9.0)
Diane	8/19/2002	1	19	410	7	6	6
Diane	8/19/2002	2	12	360	7	6	6
Diane	8/19/2002	3	20	350	7	6	6
Diane	9/23/2002	1	20	350	10	6	6
Diane	9/23/2002	2	21	430	13	6	6
Diane	9/23/2002	3	25	390	12	6	6

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Diane	10/16/2002	1	18	370	8	8	8
Diane	10/16/2002	2	16	260	10	7	7
Diane	10/16/2002	3	19	400	9	8	8
Diane	11/13/2002	1	18	370	9	8	8
Diane	11/13/2002	2	21	670	10	8	8
Diane	11/13/2002	3	17	330	9	8	8
Diane	12/7/2002	1	17	360	2	8	8
Diane	12/7/2002	2	19	440	2	7	7
Diane	12/7/2002	3	19	340	3	7	7
Diane	1/15/2003	1	19	450	3	9	9
Diane	1/15/2003	2	21	490	3	8	8
Diane	1/15/2003	3	16	410	3	7.5	7.5
Diane	2/24/2003	1	16	400	2	6	6
Diane	2/24/2003	2	17	380	2	6	6
Diane	2/24/2003	3	18	510	2	6	6
Diane	3/24/2003	1	18	600	3	7	7
Diane	3/24/2003	2	19	500	3	7	7
Diane	3/24/2003	3	16	400	4	7	7
Diane	4/24/2003	1	15	400	4	7	7
Diane	4/24/2003	2	16	350	5	6.5	6.5
Diane	4/24/2003	3	15	330	5	6.5	6.5
Diane	5/19/2003	1	10	290	3	.	Bottom(10.0)
Diane	5/19/2003	2	11	290	3	11	11
Diane	5/19/2003	3	10	290	3	.	Bottom(9.0)
Diane	6/16/2003	1	12	310	2	.	Bottom(10.0)
Diane	6/16/2003	2	13	320	2	11	11
Diane	6/16/2003	3	12	360	2	.	Bottom(9.0)
Diane	7/14/2003	1	15	580	9	7.5	7.5
Diane	7/14/2003	2	16	600	8	8	8
Diane	7/14/2003	3	13	440	7	7.5	7.5
Diane	8/11/2003	1	15	260	8	7	7
Diane	8/11/2003	2	14	310	6	7	7
Diane	8/11/2003	3	18	300	8	6.5	6.5
Diane	9/15/2003	1	14	430	6	6	6
Diane	9/15/2003	2	18	360	7	6	6
Diane	9/15/2003	3	18	390	7	6	6
Diane	10/23/2003	1	24	530	7	7	7
Diane	10/23/2003	2	20	430	7	7	7
Diane	10/23/2003	3	20	480	8	6	6
Diane	11/17/2003	1	21	620	10	6	6
Diane	11/17/2003	2	20	740	9	6	6
Diane	11/17/2003	3	17	610	10	6	6
Diane	12/19/2003	1	22	530	14	4.5	4.5
Diane	12/19/2003	2	24	610	13	4.5	4.5
Diane	12/19/2003	3	34	600	13	4.5	4.5
Diane-spillway	6/20/2000	1	56	1100	.	.	.
Iamonia	6/3/1992	1	18	580	8	2.8	2.8
Iamonia	6/3/1992	2	17	590	8	5.8	5.8
Iamonia	6/3/1992	3	23	720	9	.	Bottom(2.0)
Iamonia	7/7/1992	1	18	440	.	2.5	2.5
Iamonia	7/7/1992	2	16	330	8	4.5	4.5
Iamonia	7/7/1992	3	19	630	8	.	.
Iamonia	5/27/1993	1	17	490	6	.	.
Iamonia	5/27/1993	2	13	490	10	.	.
Iamonia	5/27/1993	3	14	520	12	.	.
Iamonia	1/9/1998	1	8	390	3	8	8
Iamonia	1/9/1998	2	8	330	3	6	6
Iamonia	1/9/1998	3	7	350	3	10	10
Iamonia	1/23/1998	1	12	280	12	5	5
Iamonia	1/23/1998	2	13	380	9	6	6
Iamonia	1/23/1998	3	12	330	11	7	7
Iamonia	2/20/1998	1	12	450	3	5	5
Iamonia	2/20/1998	2	46	1080	8	7	7
Iamonia	2/20/1998	3	15	470	4	11	11
Iamonia	3/24/1998	1	17	570	6	6	6
Iamonia	3/24/1998	2	19	500	4	5	5
Iamonia	3/24/1998	3	17	490	7	6	6
Iamonia	4/25/1998	1	18	550	13	2	2
Iamonia	4/25/1998	2	18	450	15	3	3
Iamonia	4/25/1998	3	19	490	23	4	4
Iamonia	5/22/1998	1	17	670	8	3	3

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Iamonia	5/22/1998	2	15	530	10	3	3
Iamonia	5/22/1998	3	21	550	22	3	3
Iamonia	6/9/1998	1	18	420	8	2	2
Iamonia	6/9/1998	2	19	470	19	3	3
Iamonia	6/9/1998	3	18	450	11	5	5
Iamonia	7/9/1998	1	.	.	9	2	2
Iamonia	7/9/1998	2	16	420	5	2	2
Iamonia	7/9/1998	3	20	490	11	2	2
Iamonia	8/18/1998	1	16	460	11	.	Weeds(3.0)
Iamonia	8/18/1998	2	21	590	12	.	Weeds(3.0)
Iamonia	8/18/1998	3	13	400	8	5	5
Iamonia	9/18/1998	1	18	660	2	3	3
Iamonia	9/18/1998	2	27	670	7	3	3
Iamonia	9/18/1998	3	16	500	2	4	4
Iamonia	10/26/1998	1	17	340	13	4	4
Iamonia	10/26/1998	2	28	630	9	5	5
Iamonia	10/26/1998	3	14	390	8	5	5
Iamonia	11/30/1998	1	9	280	2	3	3
Iamonia	11/30/1998	2	10	290	1	5	5
Iamonia	11/30/1998	3	9	280	1	5	5
Iamonia	12/21/1998	1	.	460	5	.	Weeds(2.0)
Iamonia	12/21/1998	2	9	310	7	.	Weeds(2.0)
Iamonia	12/21/1998	3	7	340	3	5	5
Iamonia	1/29/1999	1	10	290	4	3	3
Iamonia	1/29/1999	2	15	330	5	3	3
Iamonia	1/29/1999	3	9	240	5	7	7
Iamonia	3/23/1999	1	13	410	3	.	Weeds
Iamonia	3/23/1999	2	11	440	4	.	Weeds
Iamonia	3/23/1999	3	29	570	6	8	8
Iamonia	4/27/1999	1	11	430	7	3	3
Iamonia	4/27/1999	2	12	390	5	3	3
Iamonia	4/27/1999	3	14	520	3	5	5
Iamonia	5/28/1999	1	15	540	3	2	2
Iamonia	5/28/1999	2	13	370	3	2	2
Iamonia	5/28/1999	3	13	480	3	3	3
Iamonia	6/30/1999	1	15	510	5	2	2
Iamonia	6/30/1999	2	13	450	8	2	2
Iamonia	6/30/1999	3	12	400	.	8	8
Iamonia	7/29/1999	1	13	460	4	2	2
Iamonia	7/29/1999	2	13	490	4	2	2
Iamonia	7/29/1999	3	13	430	3	5	5
Iamonia	8/31/1999	1	16	400	6	3	3
Iamonia	8/31/1999	2	28	710	7	3	3
Iamonia	8/31/1999	3	16	470	10	4	4
Iamonia	9/29/1999	1	42	1410	7	2.5	2.5
Iamonia	9/29/1999	2	14	470	.	2.5	2.5
Iamonia	9/29/1999	3	11	390	3	5	5
Iamonia	11/22/1999	1	11	370	5	3	3
Iamonia	11/22/1999	2	16	280	5	.	Weeds
Iamonia	11/22/1999	3	10	330	5	8	8
Iamonia	3/19/2002	1	21	1010	5	3.3	3.3
Iamonia	3/19/2002	2	20	1010	36	3.3	3.3
Iamonia	3/19/2002	3	76	1090	54	3.3	3.3
Iamonia	4/27/2002	1	24	830	12	2.3	2.3
Iamonia	4/27/2002	2	37	1020	52	2.3	2.3
Iamonia	4/27/2002	3	49	930	37	2.1	2.1
Iamonia	5/30/2002	1	22	890	12	2.8	2.8
Iamonia	5/30/2002	2	18	880	4	2.1	2.1
Iamonia	5/30/2002	3	39	800	14	.	Weeds
Iamonia	6/30/2002	1	19	700	7	.	Bottom(3.0)
Iamonia	6/30/2002	2	14	750	5	.	Bottom(3.0)
Iamonia	6/30/2002	3	43	680	8	.	Weeds
Iamonia	7/30/2002	1	18	550	6	.	Bottom(3.0)
Iamonia	7/30/2002	2	13	710	4	.	Bottom(3.0)
Iamonia	7/30/2002	3	65	1040	24	.	Bottom(3.0)
Iamonia	9/30/2003	1	31	850	28	1.5	1.5
Iamonia	9/30/2003	2	33	900	27	1.5	1.5
Iamonia	9/30/2003	3	33	1020	21	1	1
Meginnis Arm	4/11/1999	1	96	1360	70	2.3	2.3
Meginnis Arm	4/11/1999	2	116	890	47	2.5	2.5
Meginnis Arm	4/11/1999	3	450	2840	181	.	Bottom(1.0)

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Meginnis Arm	5/16/1999	1	105	540	21	3.9	3.9
Meginnis Arm	5/16/1999	2	106	620	22	3	3
Meginnis Arm	5/16/1999	3	163	490	29	.	Bottom(2.3)
Meginnis Arm	8/19/2001	1	87	340	13	4.8	4.8
Meginnis Arm	8/19/2001	2	83	220	17	4.5	4.5
Meginnis Arm	8/19/2001	3	87	270	15	.	Bottom(2.5)
Meginnis Arm	9/16/2001	1	59	290	13	5.5	5.5
Meginnis Arm	9/16/2001	2	54	310	13	4.8	4.8
Meginnis Arm	9/16/2001	3	58	290	23	.	Bottom(4.0)
Meginnis Arm	10/28/2001	1	47	550	24	3.8	3.8
Meginnis Arm	10/28/2001	2	46	570	21	4	4
Meginnis Arm	10/28/2001	3	30	310	4	.	Bottom(4.0)
Meginnis Arm	11/25/2001	1	47	370	5	5.5	5.5
Meginnis Arm	11/25/2001	2	43	370	4	6	6
Meginnis Arm	11/25/2001	3	38	360	3	.	Bottom(4.0)
Meginnis Arm	12/28/2001	1	33	300	17	5.3	5.3
Meginnis Arm	12/28/2001	2	43	380	18	6.3	6.3
Meginnis Arm	12/28/2001	3	33	370	11	.	Bottom(4.3)
Meginnis Arm	1/30/2002	1	44	260	4	7	7
Meginnis Arm	1/30/2002	2	39	390	6	7	7
Meginnis Arm	1/30/2002	3	36	500	6	.	Bottom(4.0)
Meginnis Arm	2/24/2002	1	41	420	7	6	6
Meginnis Arm	2/24/2002	2	48	510	17	4	4
Meginnis Arm	2/24/2002	3	34	370	10	.	Bottom(3.5)
Meginnis Arm	3/30/2002	1	42	310	12	5.5	5.5
Meginnis Arm	3/30/2002	2	44	420	12	4.3	4.3
Meginnis Arm	3/30/2002	3	41	400	6	.	Bottom(4.3)
Meginnis Arm	5/29/2002	1	37	460	9	.	Weeds
Meginnis Arm	5/29/2002	2	45	620	4	.	Weeds
Meginnis Arm	5/29/2002	3	30	520	20	.	Weeds
Meginnis Arm	6/27/2002	1	91	560	10	.	.
Meginnis Arm	6/27/2002	2	24	430	11	.	.
Meginnis Arm	6/27/2002	3	25	290	12	.	.
Meginnis Arm	7/30/2002	1	46	230	8	.	Bottom(4.0)
Meginnis Arm	7/30/2002	2	22	250	7	.	Bottom(3.0)
Meginnis Arm	7/30/2002	3	18	330	7	.	Weeds
Meginnis Arm	10/31/2002	1	18	300	6	.	Weeds
Meginnis Arm	10/31/2002	2	21	300	34	.	Weeds
Meginnis Arm	10/31/2002	3	34	310	8	.	Weeds
Meginnis Arm	11/30/2002	1	16	590	19	.	Weeds
Meginnis Arm	11/30/2002	2	7	160	3	.	Weeds
Meginnis Arm	11/30/2002	3	9	360	6	.	Weeds
Monkey Business	2/21/1993	1	40	520	11	4	4
Monkey Business	2/21/1993	2	31	430	12	4.3	4.3
Monkey Business	2/21/1993	3	30	510	11	4.3	4.3
Monkey Business	3/21/1993	1	48	440	6	6	6
Monkey Business	3/21/1993	2	47	500	6	.	Bottom(5.3)
Monkey Business	3/21/1993	3	48	460	6	6	6
Monkey Business	4/30/1993	1	35	660	11	.	Bottom(5.5)
Monkey Business	4/30/1993	2	34	620	10	.	Bottom(4.9)
Monkey Business	4/30/1993	3	34	690	11	5.8	5.8
Monkey Business	5/31/1993	1	34	580	11	.	Bottom(4.8)
Monkey Business	5/31/1993	2	39	590	12	.	Bottom(4.3)
Monkey Business	5/31/1993	3	42	610	13	5	5
Monkey Business	6/29/1993	1	43	800	19	4	4
Monkey Business	6/29/1993	2	44	680	18	.	Bottom(4.0)
Monkey Business	6/29/1993	3	48	870	20	4	4
Monkey Business	7/27/1993	1	33	1030	36	3	3
Monkey Business	7/27/1993	2	34	850	33	3	3
Monkey Business	7/27/1993	3	36	850	31	3	3
Monkey Business	8/17/1993	1	42	670	24	.	.
Monkey Business	8/17/1993	2	41	640	22	.	.
Monkey Business	8/17/1993	3	43	580	45	.	.
Monkey Business	8/31/1993	1	48	660	40	4	4
Monkey Business	8/31/1993	2	47	610	32	.	Bottom(3.5)
Monkey Business	8/31/1993	3	43	610	27	4.5	4.5
Monkey Business	9/26/1993	1	56	830	64	4	4
Monkey Business	9/26/1993	2	56	830	58	.	Bottom(3.8)
Monkey Business	9/26/1993	3	57	830	61	4.5	4.5
Monkey Business	10/31/1993	1	84	1200	93	2.5	2.5
Monkey Business	10/31/1993	2	77	1040	92	2.5	2.5

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Monkey Business	10/31/1993	3	97	1240	98	2.5	2.5
Monkey Business	11/21/1993	1	57	1030	56	2.8	2.8
Monkey Business	11/21/1993	2	61	1030	69	3	3
Monkey Business	11/21/1993	3	62	1080	77	2.8	2.8
Monkey Business	12/28/1993	1	51	920	45	4	4
Monkey Business	12/28/1993	2	50	900	41	4	4
Monkey Business	12/28/1993	3	44	810	38	4.3	4.3
Monkey Business	1/31/1994	1	61	970	34	3	3
Monkey Business	1/31/1994	2	63	940	32	3	3
Monkey Business	1/31/1994	3	65	930	29	3	3
Monkey Business	2/13/1994	1	48	830	26	4.5	4.5
Monkey Business	2/13/1994	2	54	840	20	4.8	4.8
Monkey Business	2/13/1994	3	45	660	19	5	5
Monkey Business	3/31/1994	1	35	730	15	3.5	3.5
Monkey Business	3/31/1994	2	41	720	13	3.9	3.9
Monkey Business	3/31/1994	3	34	650	13	3.5	3.5
Monkey Business	4/17/1994	1	41	740	15	3	3
Monkey Business	4/17/1994	2	40	640	13	3.5	3.5
Monkey Business	4/17/1994	3	39	640	13	3.5	3.5
Monkey Business	6/29/1994	1	34	500	18	4.3	4.3
Monkey Business	6/29/1994	2	34	510	17	4.4	4.4
Monkey Business	6/29/1994	3	32	460	17	5	5
Monkey Business	7/17/1994	1	33	640	14	4.5	4.5
Monkey Business	7/17/1994	2	31	460	11	4.8	4.8
Monkey Business	7/17/1994	3	30	460	11	5.3	5.3
Monkey Business	8/21/1994	1	33	510	14	4	4
Monkey Business	8/21/1994	2	37	440	15	3.8	3.8
Monkey Business	8/21/1994	3	39	430	14	3.8	3.8
Monkey Business	9/25/1994	1	40	620	30	4	4
Monkey Business	9/25/1994	2	37	610	29	4	4
Monkey Business	9/25/1994	3	39	600	29	4	4
Monkey Business	10/16/1994	1	33	440	23	3.3	3.3
Monkey Business	10/16/1994	2	32	440	23	3.3	3.3
Monkey Business	10/16/1994	3	34	450	24	3.8	3.8
Monkey Business	5/27/1995	1	22	390	5	.	Bottom(5.0)
Monkey Business	5/27/1995	2	23	340	4	.	Bottom(4.0)
Monkey Business	5/27/1995	3	24	380	4	.	Bottom(5.8)
Monkey Business	7/9/1995	1	23	590	9	5	5
Monkey Business	7/9/1995	2	28	590	9	6	6
Monkey Business	7/9/1995	3	27	560	10	6	6
Monkey Business	10/8/1995	1	.	.	18	4.1	4.1
Monkey Business	10/8/1995	2	23	510	15	4	4
Monkey Business	10/8/1995	3	25	670	15	4	4
Monkey Business	11/22/1995	1	24	600	16	5	5
Monkey Business	11/22/1995	2	27	560	17	4.3	4.3
Monkey Business	11/22/1995	3	26	750	15	5	5
Monkey Business	12/17/1995	1	35	810	25	4.6	4.6
Monkey Business	12/17/1995	2	32	630	16	4	4
Monkey Business	12/17/1995	3	31	680	14	4	4
Monkey Business	1/28/1996	1	38	750	24	3	3
Monkey Business	1/28/1996	2	51	900	30	2.9	2.9
Monkey Business	1/28/1996	3	51	920	41	2.7	2.7
Monkey Business	2/25/1996	1	38	720	5	5.6	5.6
Monkey Business	2/25/1996	2	36	670	5	5	5
Monkey Business	2/25/1996	3	31	580	4	5.4	5.4
Monkey Business	3/24/1996	1	35	450	8	.	Bottom(5.6)
Monkey Business	3/24/1996	2	34	510	6	.	Bottom(5.1)
Monkey Business	3/24/1996	3	32	540	6	6.8	6.8
Monkey Business	4/21/1996	1	20	370	7	.	Bottom(5.7)
Monkey Business	4/21/1996	2	16	410	6	.	Bottom(5.7)
Monkey Business	4/21/1996	3	19	370	6	.	Bottom(6.7)
Monkey Business	5/27/1996	1	31	500	89	4	4
Monkey Business	5/27/1996	2	27	500	13	3.6	3.6
Monkey Business	5/27/1996	3	28	510	13	4	4
Monkey Business	6/30/1996	1	31	540	9	4.3	4.3
Monkey Business	6/30/1996	2	30	470	10	4.1	4.1
Monkey Business	6/30/1996	3	28	500	12	4.5	4.5
Monkey Business	7/28/1996	1	25	600	14	4	4
Monkey Business	7/28/1996	2	28	620	13	3.7	3.7
Monkey Business	7/28/1996	3	25	530	14	3.8	3.8
Monkey Business	8/31/1996	1	31	770	33	2.6	2.6

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Monkey Business	8/31/1996	2	48	660	37	2	2
Monkey Business	8/31/1996	3	31	660	22	2.9	2.9
Monkey Business	9/22/1996	1	33	770	27	3.5	3.5
Monkey Business	9/22/1996	2	32	640	26	3.3	3.3
Monkey Business	9/22/1996	3	38	610	26	3.3	3.3
Monkey Business	10/27/1996	1	33	750	45	3	3
Monkey Business	10/27/1996	2	38	690	47	3	3
Monkey Business	10/27/1996	3	34	730	48	3.2	3.2
Monkey Business	11/17/1996	1	39	740	35	2.5	2.5
Monkey Business	11/17/1996	2	42	760	35	2.5	2.5
Monkey Business	11/17/1996	3	38	800	36	2.4	2.4
Monkey Business	12/8/1996	1	40	630	14	2.9	2.9
Monkey Business	12/8/1996	2	41	660	13	2.9	2.9
Monkey Business	12/8/1996	3	39	620	15	3.5	3.5
Monkey Business	1/26/1997	1	84	780	22	1.7	1.7
Monkey Business	1/26/1997	2	85	770	22	1.6	1.6
Monkey Business	1/26/1997	3	83	730	22	1.8	1.8
Monkey Business	2/23/1997	1	100	770	27	1.4	1.4
Monkey Business	2/23/1997	2	99	750	25	1.2	1.2
Monkey Business	2/23/1997	3	102	810	24	1.2	1.2
Monkey Business	3/30/1997	1	92	1140	40	1.7	1.7
Monkey Business	3/30/1997	2	94	1150	40	1.7	1.7
Monkey Business	3/30/1997	3	91	1200	42	1.7	1.7
Monkey Business	4/27/1997	1	106	1430	36	1.5	1.5
Monkey Business	4/27/1997	2	96	1310	42	1.5	1.5
Monkey Business	4/27/1997	3	105	1380	36	1.4	1.4
Monkey Business	5/25/1997	1	60	970	39	1.9	1.9
Monkey Business	5/25/1997	2	60	850	41	1.9	1.9
Monkey Business	5/25/1997	3	60	900	42	1.9	1.9
Monkey Business	6/22/1997	1	41	630	26	3.2	3.2
Monkey Business	6/22/1997	2	41	510	25	2.7	2.7
Monkey Business	6/22/1997	3	45	510	28	2.7	2.7
Monkey Business	8/24/1997	1	48	770	51	3	3
Monkey Business	8/24/1997	2	53	910	60	2.7	2.7
Monkey Business	8/24/1997	3	47	840	47	2.7	2.7
Monkey Business	9/28/1997	1	68	1290	179	2.3	2.3
Monkey Business	9/28/1997	2	65	1250	159	2.3	2.3
Monkey Business	9/28/1997	3	56	1130	112	2.3	2.3
Monkey Business	10/31/1997	1	83	930	78	1.6	1.6
Monkey Business	10/31/1997	2	72	930	68	1.6	1.6
Monkey Business	10/31/1997	3	74	950	78	1.9	1.9
Monkey Business	11/23/1997	1	48	590	28	2.5	2.5
Monkey Business	11/23/1997	2	47	570	27	2.5	2.5
Monkey Business	11/23/1997	3	48	600	30	2.5	2.5
Monkey Business	1/25/1998	1	66	950	54	1.7	1.7
Monkey Business	1/25/1998	2	66	970	54	1.7	1.7
Monkey Business	1/25/1998	3	65	850	53	1.7	1.7
Monkey Business	2/21/1998	1	55	870	51	1.6	1.6
Monkey Business	2/21/1998	2	51	1050	47	1.8	1.8
Monkey Business	2/21/1998	3	47	900	49	1.6	1.6
Monkey Business	3/29/1998	1	39	470	11	4.8	4.8
Monkey Business	3/29/1998	2	39	500	11	4.2	4.2
Monkey Business	3/29/1998	3	41	470	13	5	5
Monkey Business	4/26/1998	1	39	520	17	3.3	3.3
Monkey Business	4/26/1998	2	38	460	17	2.9	2.9
Monkey Business	4/26/1998	3	37	460	18	2.6	2.6
Monkey Business	5/31/1998	1	44	710	35	2	2
Monkey Business	5/31/1998	2	43	720	32	2	2
Monkey Business	5/31/1998	3	38	750	34	2	2
Monkey Business	6/28/1998	1	.	.	28	2.3	2.3
Monkey Business	6/28/1998	2	53	660	31	2.5	2.5
Monkey Business	6/28/1998	3	41	580	23	3	3
Monkey Business	7/31/1998	1	71	970	32	1.7	1.7
Monkey Business	7/31/1998	2	.	.	24	1.7	1.7
Monkey Business	7/31/1998	3	58	880	24	1.7	1.7
Monkey Business	8/23/1998	1	71	990	41	2.1	2.1
Monkey Business	8/23/1998	2	83	1070	45	2	2
Monkey Business	8/23/1998	3	65	970	34	2	2
Monkey Business	9/27/1998	1	48	660	52	2.7	2.7
Monkey Business	9/27/1998	2	54	800	58	2.7	2.7
Monkey Business	9/27/1998	3	44	750	42	2.7	2.7

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Monkey Business	10/31/1998	1	60	1240	55	1.4	1.4
Monkey Business	10/31/1998	2	55	1250	54	1.3	1.3
Monkey Business	10/31/1998	3	54	1140	54	1.3	1.3
Monkey Business	11/28/1998	1	54	1160	52	1.6	1.6
Monkey Business	11/28/1998	2	50	1140	53	1.6	1.6
Monkey Business	11/28/1998	3	54	1170	52	1.6	1.6
Monkey Business	12/28/1998	1	53	880	51	2.6	2.6
Monkey Business	12/28/1998	2	57	890	54	2.7	2.7
Monkey Business	12/28/1998	3	47	800	37	2.7	2.7
Monkey Business	1/30/1999	1	64	790	48	2.4	2.4
Monkey Business	1/30/1999	2	65	760	40	2.4	2.4
Monkey Business	1/30/1999	3	61	740	36	2.4	2.4
Monkey Business	2/28/1999	1	63	960	41	1.7	1.7
Monkey Business	2/28/1999	2	67	880	49	1.7	1.7
Monkey Business	2/28/1999	3	71	830	52	1.7	1.7
Monkey Business	3/28/1999	1	94	860	33	2	2
Monkey Business	3/28/1999	2	80	790	30	2	2
Monkey Business	3/28/1999	3	77	890	28	1.9	1.9
Monkey Business	4/25/1999	1	58	910	31	2.5	2.5
Monkey Business	4/25/1999	2	55	750	32	2.5	2.5
Monkey Business	4/25/1999	3	52	920	23	2.5	2.5
Monkey Business	5/30/1999	1	55	710	32	2	2
Monkey Business	5/30/1999	2	60	900	31	2	2
Monkey Business	5/30/1999	3	61	740	35	2	2
Monkey Business	6/27/1999	1	75	1250	53	1.5	1.5
Monkey Business	6/27/1999	2	72	1260	50	1.5	1.5
Monkey Business	6/27/1999	3	79	1020	52	1.4	1.4
Monkey Business	7/25/1999	1	49	1140	38	2.4	2.4
Monkey Business	7/25/1999	2	54	1090	38	2.4	2.4
Monkey Business	7/25/1999	3	56	1140	40	2.3	2.3
Monkey Business	8/29/1999	1	69	830	57	2.5	2.5
Monkey Business	8/29/1999	2	66	980	47	2.6	2.6
Monkey Business	8/29/1999	3	59	1010	45	2.5	2.5
Monkey Business	9/26/1999	1	61	730	51	2.4	2.4
Monkey Business	9/26/1999	2	51	910	40	2.4	2.4
Monkey Business	9/26/1999	3	54	890	38	2.4	2.4
Monkey Business	10/31/1999	1	54	830	36	2.2	2.2
Monkey Business	10/31/1999	2	57	810	36	2.2	2.2
Monkey Business	10/31/1999	3	56	840	29	2.5	2.5
Monkey Business	11/28/1999	1	53	770	33	2.2	2.2
Monkey Business	11/28/1999	2	55	790	33	2	2
Monkey Business	11/28/1999	3	47	750	32	2.3	2.3
Monkey Business	12/19/1999	1	52	760	28	2.1	2.1
Monkey Business	12/19/1999	2	44	830	27	2	2
Monkey Business	12/19/1999	3	46	680	29	2	2
Monkey Business	2/20/2000	1	59	990	39	2.2	2.2
Monkey Business	2/20/2000	2	55	950	37	2.2	2.2
Monkey Business	2/20/2000	3	56	960	33	2.2	2.2
Monkey Business	3/26/2000	1	47	750	21	3	3
Monkey Business	3/26/2000	2	49	700	21	3	3
Monkey Business	3/26/2000	3	49	650	17	3	3
Monkey Business	5/29/2000	1	63	1370	57	2	2
Monkey Business	5/29/2000	2	66	1380	57	2	2
Monkey Business	5/29/2000	3	60	1200	55	2	2
Monkey Business	6/30/2000	1	79	1150	70	2.1	2.1
Monkey Business	6/30/2000	2	72	1170	64	2.1	2.1
Monkey Business	6/30/2000	3	69	1150	60	2.1	2.1
Monkey Business	7/23/2000	1	90	1350	96	1.9	1.9
Monkey Business	7/23/2000	2	83	1340	88	1.9	1.9
Monkey Business	7/23/2000	3	86	1370	92	1.9	1.9
Monkey Business	8/27/2000	1	73	1120	84	2.1	2.1
Monkey Business	8/27/2000	2	69	1040	64	2.1	2.1
Monkey Business	8/27/2000	3	68	1040	76	2.1	2.1
Monkey Business	9/30/2000	1	62	1000	67	2.3	2.3
Monkey Business	9/30/2000	2	62	1030	78	2.2	2.2
Monkey Business	9/30/2000	3	58	970	66	2.2	2.2
Monkey Business	10/22/2000	1	45	890	36	2.3	2.3
Monkey Business	10/22/2000	2	43	840	36	2	2
Monkey Business	10/22/2000	3	45	910	30	2.2	2.2
Monkey Business	11/26/2000	1	45	730	22	3	3
Monkey Business	11/26/2000	2	49	730	26	3	3

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Monkey Business	11/26/2000	3	50	810	41	3	3
Monkey Business	12/24/2000	1	34	520	21	3.8	3.8
Monkey Business	12/24/2000	2	36	420	24	3.8	3.8
Monkey Business	12/24/2000	3	35	640	21	3.8	3.8
Monkey Business	1/28/2001	1	44	650	15	3.7	3.7
Monkey Business	1/28/2001	2	40	460	14	3.7	3.7
Monkey Business	1/28/2001	3	43	630	15	4	4
Monkey Business	2/25/2001	1	41	630	16	3.3	3.3
Monkey Business	2/25/2001	2	38	700	16	3.3	3.3
Monkey Business	2/25/2001	3	39	630	14	3.3	3.3
Monkey Business	3/25/2001	1	48	710	14	4.5	4.5
Monkey Business	3/25/2001	2	37	660	13	4.7	4.7
Monkey Business	3/25/2001	3	41	560	14	4.7	4.7
Monkey Business	4/28/2001	1	23	570	9	.	Bottom(5.3)
Monkey Business	4/28/2001	2	22	430	9	.	Bottom(5.8)
Monkey Business	4/28/2001	3	22	370	8	6	6
Monkey Business	5/28/2001	1	42	520	.	2.7	2.7
Monkey Business	5/28/2001	2	41	700	.	2.8	2.8
Monkey Business	5/28/2001	3	40	570	.	2.7	2.7
Monkey Business	6/30/2001	1	39	710	29	2.4	2.4
Monkey Business	6/30/2001	2	42	770	30	2.4	2.4
Monkey Business	6/30/2001	3	44	790	30	2.4	2.4
Monkey Business	8/26/2001	1	45	680	28	2.6	2.6
Monkey Business	8/26/2001	2	41	650	26	2.6	2.6
Monkey Business	8/26/2001	3	43	660	27	2.6	2.6
Monkey Business	9/30/2001	1	63	1050	55	1.7	1.7
Monkey Business	9/30/2001	2	64	880	58	1.7	1.7
Monkey Business	9/30/2001	3	62	850	58	1.7	1.7
Monkey Business	11/18/2001	1	48	720	19	2.5	2.5
Monkey Business	11/18/2001	2	49	690	19	2.5	2.5
Monkey Business	11/18/2001	3	54	730	19	2.4	2.4
Monkey Business	12/30/2001	1	56	680	18	3	3
Monkey Business	12/30/2001	2	43	600	16	3	3
Monkey Business	12/30/2001	3	47	640	18	3	3
Monkey Business	1/27/2002	1	52	650	28	2.7	2.7
Monkey Business	1/27/2002	2	55	670	29	2.6	2.6
Monkey Business	1/27/2002	3	45	650	24	3	3
Monkey Business	2/24/2002	1	31	570	5	.	Bottom(5.0)
Monkey Business	2/24/2002	2	30	490	5	5	5
Monkey Business	2/24/2002	3	28	490	5	5.1	5.1
Monkey Business	3/24/2002	1	25	320	4	5.3	5.3
Monkey Business	3/24/2002	2	32	430	5	.	Bottom(4.8)
Monkey Business	3/24/2002	3	25	400	4	5.3	5.3
Monkey Business	4/28/2002	1	33	430	7	3	3
Monkey Business	4/28/2002	2	35	470	8	3	3
Monkey Business	4/28/2002	3	32	520	8	3.4	3.4
Monkey Business	5/27/2002	1	55	1010	26	2.3	2.3
Monkey Business	5/27/2002	2	54	820	26	2.3	2.3
Monkey Business	5/27/2002	3	52	980	27	2.2	2.2
Monkey Business	6/30/2002	1	66	1820	89	1.2	1.2
Monkey Business	6/30/2002	2	68	1840	89	1.1	1.1
Monkey Business	6/30/2002	3	71	1900	109	1	1
Monkey Business	7/28/2002	1	63	1440	63	1.6	1.6
Monkey Business	7/28/2002	2	59	1330	61	1.4	1.4
Monkey Business	7/28/2002	3	56	1270	64	1.4	1.4
Monkey Business	8/25/2002	1	61	1390	60	1.5	1.5
Monkey Business	8/25/2002	2	63	1390	60	1.5	1.5
Monkey Business	8/25/2002	3	69	1430	63	1.5	1.5
Monkey Business	9/29/2002	1	77	1650	142	1.3	1.3
Monkey Business	9/29/2002	2	80	1680	215	1.1	1.1
Monkey Business	9/29/2002	3	75	1670	125	1.2	1.2
Monkey Business	10/27/2002	1	61	1670	79	1.6	1.6
Monkey Business	10/27/2002	2	73	1810	93	1.6	1.6
Monkey Business	10/27/2002	3	69	1810	71	1.6	1.6
Monkey Business	11/30/2002	1	61	1260	69	2.7	2.7
Monkey Business	11/30/2002	2	58	.	51	2.2	2.2
Monkey Business	11/30/2002	3	59	1120	54	2.1	2.1
Monkey Business	12/29/2002	1	50	680	48	2.1	2.1
Monkey Business	12/29/2002	2	53	600	43	2.1	2.1
Monkey Business	12/29/2002	3	53	630	52	2	2
Monkey Business	2/23/2003	1	56	970	43	2	2

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Monkey Business	2/23/2003	2	53	950	44	2	2
Monkey Business	2/23/2003	3	53	930	44	2	2
Monkey Business	3/23/2003	1	50	1150	90	1.6	1.6
Monkey Business	3/23/2003	2	47	1150	80	1.6	1.6
Monkey Business	3/23/2003	3	50	1150	86	1.6	1.6
Monkey Business	4/26/2003	1	59	940	40	1.9	1.9
Monkey Business	4/26/2003	2	50	680	37	1.7	1.7
Monkey Business	4/26/2003	3	56	770	41	1.7	1.7
Monkey Business	5/25/2003	1	40	600	16	2.6	2.6
Monkey Business	5/25/2003	2	39	670	16	3	3
Monkey Business	5/25/2003	3	36	610	14	2.6	2.6
Monkey Business	6/22/2003	1	29	510	12	3.7	3.7
Monkey Business	6/22/2003	2	34	490	13	3.4	3.4
Monkey Business	6/22/2003	3	30	470	13	3.9	3.9
Monkey Business	7/20/2003	1	63	920	55	1.8	1.8
Monkey Business	7/20/2003	2	58	910	47	2	2
Monkey Business	7/20/2003	3	59	920	48	1.8	1.8
Monkey Business	8/23/2003	1	59	910	45	.	.
Monkey Business	8/23/2003	2	56	810	45	1.6	1.6
Monkey Business	8/23/2003	3	55	730	47	1.6	1.6
Monkey Business	9/27/2003	1	93	1230	68	1.3	1.3
Monkey Business	9/27/2003	2	105	1080	67	1.2	1.2
Monkey Business	9/27/2003	3	96	1220	60	1.2	1.2
Monkey Business	10/19/2003	1	93	1350	79	1.3	1.3
Monkey Business	10/19/2003	2	88	1370	75	1.3	1.3
Monkey Business	10/19/2003	3	87	1390	82	1.3	1.3
Monkey Business	11/22/2003	1	39	1000	51	1.4	1.4
Monkey Business	11/22/2003	2	41	.	55	1.4	1.4
Monkey Business	11/22/2003	3	39	1020	57	1.3	1.3
Monkey Business	12/21/2003	1	37	570	21	2.5	2.5
Monkey Business	12/21/2003	2	26	490	17	2.5	2.5
Monkey Business	12/21/2003	3	28	590	20	2.1	2.1
Monkey Business	8/20/1995	1	33	610	16	3	3
Monkey Business	8/20/1995	2	49	660	26	1.8	1.8
Monkey Business	8/20/1995	3	44	670	24	1.8	1.8
Ochlockonee Riv	4/6/1999	1	144	1020	5	2.5	2.5
Ochlockonee Riv	5/20/1999	1	109	690	6	.	.
Ochlockonee Riv	6/18/1999	1	114	800	36	3	3
Ochlockonee Riv	7/22/1999	1	151	950	3	2	2
Ochlockonee Riv	8/14/1999	1	191	790	2	2.5	2.5
Ochlockonee Riv	9/28/1999	1	143	1450	3	3.5	3.5
Ochlockonee Riv	10/25/1999	1	175	1090	1	3	3
Ochlockonee Riv	11/23/1999	1	131	720	3	.	Bottom(4.0)
Ochlockonee Riv	12/27/1999	1	173	640	4	2.5	2.5
Ochlockonee Riv	1/29/2000	1	177	1130	3	3	3
Ochlockonee Riv	2/28/2000	1	164	1400	4	1.5	1.5
Ochlockonee Riv	4/28/2000	1	153	1620	4	1.5	1.5
Ochlockonee Riv	5/30/2000	1	120	540	4	.	Bottom(4.0)
Ochlockonee Riv	6/16/2000	1	102	720	6	2.8	2.8
Ochlockonee Riv	7/18/2000	1	109	460	4	2.5	2.5
Ochlockonee Riv	9/26/2000	1	206	1500	3	2	2
Ochlockonee Riv	10/26/2000	1	138	1450	1	3.5	3.5
Ochlockonee Riv	11/7/2000	1	94	180	5	4	4
Ochlockonee Riv	12/7/2000	1	126	1140	2	3.5	3.5
Ochlockonee Riv	1/21/2001	1	76	500	4	2.3	2.3
Ochlockonee Riv	2/20/2001	1	122	730	2	2.5	2.5
Ochlockonee Riv	4/15/2001	1	160	1150	2	1.5	1.5
Ochlockonee Riv	5/31/2001	1	112	1020	4	4	4
Ochlockonee Riv	7/25/2001	1	125	780	1	2	2
Ochlockonee Riv	8/30/2001	1	122	890	1	2	2
Ochlockonee Riv	9/20/2001	1	124	830	1	2	2
Ochlockonee Riv	10/25/2001	1	107	1180	2	3.5	3.5
Ochlockonee Riv	11/29/2001	1	97	1310	2	3	3
Ochlockonee Riv	12/26/2001	1	106	800	1	3.5	3.5
Ochlockonee Riv	1/29/2002	1	101	370	3	3.5	3.5
Ochlockonee Riv	5/31/2002	1	106	1010	5	2.5	2.5
Ochlockonee Riv	7/23/2002	1	161	990	7	2	2
Ochlockonee Riv	10/17/2002	1	164	650	2	2	2
Ochlockonee Riv	2/1/2003	1	73	680	3	3	3
Ochlockonee Riv	4/27/2003	1	111	840	7	1.7	1.7
Ochlockonee Riv	5/15/2003	1	86	790	4	2	2

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Ochlockonee Riv	7/8/2003	1	108	750	4	1.5	1.5
Ochlockonee Riv	4/6/1999	1	136	770	4	2.5	2.5
Ochlockonee Riv	5/20/1999	1	133	660	8	.	.
Ochlockonee Riv	6/18/1999	1	115	520	14	3.5	3.5
Ochlockonee Riv	7/22/1999	1	162	770	2	2	2
Ochlockonee Riv	8/14/1999	1	175	720	3	3.5	3.5
Ochlockonee Riv	9/28/1999	1	143	1460	2	3.5	3.5
Ochlockonee Riv	10/25/1999	1	158	1170	1	3	3
Ochlockonee Riv	11/23/1999	1	142	560	3	.	.
Ochlockonee Riv	12/27/1999	1	143	790	3	2.5	2.5
Ochlockonee Riv	1/29/2000	1	181	1240	3	3	3
Ochlockonee Riv	2/28/2000	1	163	1350	3	1.5	1.5
Ochlockonee Riv	4/28/2000	1	167	1540	4	1.5	1.5
Ochlockonee Riv	5/30/2000	1	119	430	4	4	4
Ochlockonee Riv	6/16/2000	1	94	800	5	2.8	2.8
Ochlockonee Riv	7/18/2000	1	94	440	6	2.5	2.5
Ochlockonee Riv	9/26/2000	1	203	1480	2	2	2
Ochlockonee Riv	10/26/2000	1	139	1310	1	3.5	3.5
Ochlockonee Riv	11/7/2000	1	107	490	7	4	4
Ochlockonee Riv	12/7/2000	1	128	950	1	3.5	3.5
Ochlockonee Riv	1/21/2001	1	66	360	4	2.3	2.3
Ochlockonee Riv	2/20/2001	1	111	460	2	2.5	2.5
Ochlockonee Riv	4/15/2001	1	178	1100	2	1.5	1.5
Ochlockonee Riv	5/31/2001	1	112	1160	5	4	4
Ochlockonee Riv	7/25/2001	1	137	620	1	2	2
Ochlockonee Riv	8/30/2001	1	114	850	2	2	2
Ochlockonee Riv	9/20/2001	1	123	720	1	2	2
Ochlockonee Riv	10/25/2001	1	104	830	2	3.5	3.5
Ochlockonee Riv	11/29/2001	1	120	1160	2	3	3
Ochlockonee Riv	12/26/2001	1	117	540	1	3.5	3.5
Ochlockonee Riv	1/29/2002	1	108	460	2	3.5	3.5
Ochlockonee Riv	5/31/2002	1	104	700	3	2.5	2.5
Ochlockonee Riv	7/23/2002	1	160	820	6	2	2
Ochlockonee Riv	10/17/2002	1	175	790	2	2	2
Ochlockonee Riv	2/1/2003	1	77	580	3	3	3
Ochlockonee Riv	4/27/2003	1	121	800	5	1.7	1.7
Ochlockonee Riv	5/15/2003	1	106	830	4	2	2
Ochlockonee Riv	7/8/2003	1	104	770	4	1.5	1.5
Ochlockonee Riv	4/6/1999	1	129	830	3	2.8	2.8
Ochlockonee Riv	5/20/1999	1	121	720	8	.	.
Ochlockonee Riv	6/18/1999	1	115	620	12	3.5	3.5
Ochlockonee Riv	7/22/1999	1	149	950	2	2	2
Ochlockonee Riv	8/14/1999	1	184	890	3	2	2
Ochlockonee Riv	9/28/1999	1	127	1540	2	3.5	3.5
Ochlockonee Riv	10/25/1999	1	180	1040	2	3	3
Ochlockonee Riv	11/23/1999	1	139	.	3	.	.
Ochlockonee Riv	12/27/1999	1	210	790	2	2.5	2.5
Ochlockonee Riv	1/29/2000	1	170	1180	2	3	3
Ochlockonee Riv	2/28/2000	1	165	1230	2	1.5	1.5
Ochlockonee Riv	4/28/2000	1	167	1710	2	1.5	1.5
Ochlockonee Riv	5/30/2000	1	103	450	9	4	4
Ochlockonee Riv	6/16/2000	1	78	820	9	2.8	2.8
Ochlockonee Riv	7/18/2000	1	79	430	8	2.5	2.5
Ochlockonee Riv	9/26/2000	1	205	1550	1	2	2
Ochlockonee Riv	10/26/2000	1	138	1030	1	3.5	3.5
Ochlockonee Riv	11/7/2000	1	108	360	7	4	4
Ochlockonee Riv	12/7/2000	1	126	1080	1	3.5	3.5
Ochlockonee Riv	1/21/2001	1	75	600	3	2.3	2.3
Ochlockonee Riv	2/20/2001	1	109	510	1	2.5	2.5
Ochlockonee Riv	4/15/2001	1	162	1060	1	1.5	1.5
Ochlockonee Riv	5/31/2001	1	101	1290	3	4	4
Ochlockonee Riv	7/25/2001	1	139	700	1	2	2
Ochlockonee Riv	8/30/2001	1	118	640	1	2	2
Ochlockonee Riv	9/20/2001	1	120	730	1	2	2
Ochlockonee Riv	10/25/2001	1	76	960	2	3.5	3.5
Ochlockonee Riv	11/29/2001	1	96	1610	2	3	3
Ochlockonee Riv	12/26/2001	1	93	970	1	3.5	3.5
Ochlockonee Riv	1/29/2002	1	105	490	3	3.5	3.5
Ochlockonee Riv	5/31/2002	1	97	820	2	2.5	2.5
Ochlockonee Riv	7/23/2002	1	148	760	6	2	2
Ochlockonee Riv	10/17/2002	1	170	790	2	2	2

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Ochlockonee Riv	2/1/2003	1	78	420	3	3	3
Ochlockonee Riv	4/27/2003	1	123	740	5	1.7	1.7
Ochlockonee Riv	5/15/2003	1	86	920	3	2	2
Ochlockonee Riv	7/8/2003	1	108	820	4	1.5	1.5
Petty Gulf	2/27/1993	1	39	570	29	.	.
Petty Gulf	2/27/1993	2	42	600	30	.	.
Petty Gulf	2/27/1993	3	41	600	32	.	.
Petty Gulf	3/21/1993	1	33	520	12	3.3	3.3
Petty Gulf	3/21/1993	2	29	520	12	3.3	3.3
Petty Gulf	3/21/1993	3	31	490	12	3.3	3.3
Petty Gulf	4/17/1993	1	29	540	11	3.5	3.5
Petty Gulf	4/17/1993	2	31	530	11	4	4
Petty Gulf	4/17/1993	3	31	490	10	3.8	3.8
Petty Gulf	5/15/1993	1	33	630	18	3.5	3.5
Petty Gulf	5/15/1993	2	37	630	18	4	4
Petty Gulf	5/15/1993	3	34	590	16	4	4
Petty Gulf	6/12/1993	1	26	530	21	3	3
Petty Gulf	6/12/1993	2	25	580	25	3	3
Petty Gulf	6/12/1993	3	25	540	23	3.3	3.3
Petty Gulf	7/17/1993	1	33	930	39	3	3
Petty Gulf	7/17/1993	2	27	890	39	2.8	2.8
Petty Gulf	7/17/1993	3	28	880	29	2.8	2.8
Petty Gulf	8/20/1993	1	31	600	21	4	4
Petty Gulf	8/20/1993	2	31	640	28	4	4
Petty Gulf	8/20/1993	3	37	720	45	3.8	3.8
Petty Gulf	9/12/1993	1	32	590	31	3	3
Petty Gulf	9/12/1993	2	32	610	24	3	3
Petty Gulf	9/12/1993	3	32	600	26	3.3	3.3
Petty Gulf	10/17/1993	1	31	580	16	4	4
Petty Gulf	10/17/1993	2	34	560	14	4	4
Petty Gulf	10/17/1993	3	39	650	17	4	4
Petty Gulf	11/21/1993	1	33	590	18	3.8	3.8
Petty Gulf	11/21/1993	2	32	650	18	4	4
Petty Gulf	11/21/1993	3	34	520	20	4.5	4.5
Petty Gulf	12/26/1993	1	41	750	48	2	2
Petty Gulf	12/26/1993	2	41	810	49	2	2
Petty Gulf	12/26/1993	3	44	840	52	2	2
Petty Gulf	1/23/1994	1	48	750	31	2.8	2.8
Petty Gulf	1/23/1994	2	47	750	30	2.5	2.5
Petty Gulf	1/23/1994	3	40	760	30	2.5	2.5
Petty Gulf	2/21/1994	1	48	680	12	4	4
Petty Gulf	2/21/1994	2	52	700	14	4	4
Petty Gulf	2/21/1994	3	51	690	17	4	4
Petty Gulf	3/19/1994	1	35	460	9	4	4
Petty Gulf	3/19/1994	2	34	530	9	4	4
Petty Gulf	3/19/1994	3	36	540	12	4	4
Petty Gulf	4/24/1994	1	40	480	26	3	3
Petty Gulf	4/24/1994	2	40	540	26	3	3
Petty Gulf	4/24/1994	3	39	570	26	3	3
Petty Gulf	5/14/1994	1	24	360	9	4.5	4.5
Petty Gulf	5/14/1994	2	27	440	13	4.5	4.5
Petty Gulf	5/14/1994	3	31	430	17	4.5	4.5
Petty Gulf	6/26/1994	1	36	480	30	3	3
Petty Gulf	6/26/1994	2	34	480	29	3	3
Petty Gulf	6/26/1994	3	34	480	30	3	3
Petty Gulf	7/23/1994	1	25	510	18	3.8	3.8
Petty Gulf	7/23/1994	2	26	480	19	3.8	3.8
Petty Gulf	7/23/1994	3	24	410	16	4.3	4.3
Petty Gulf	8/14/1994	1	28	430	16	2	2
Petty Gulf	8/14/1994	2	28	450	18	2	2
Petty Gulf	8/14/1994	3	29	460	19	2	2
Petty Gulf	9/18/1994	1	28	460	29	2.5	2.5
Petty Gulf	9/18/1994	2	25	490	32	2.5	2.5
Petty Gulf	9/18/1994	3	27	500	38	2.8	2.8
Petty Gulf	10/16/1994	1	33	420	29	2	2
Petty Gulf	10/16/1994	2	31	400	31	2	2
Petty Gulf	10/16/1994	3	29	400	31	2	2
Petty Gulf	11/20/1994	1	21	400	20	3	3
Petty Gulf	11/20/1994	2	26	390	19	3	3
Petty Gulf	11/20/1994	3	25	350	19	3	3
Petty Gulf	12/18/1994	1	27	430	20	2	2

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Petty Gulf	12/18/1994	2	34	450	23	2	2
Petty Gulf	12/18/1994	3	38	460	26	2	2
Petty Gulf	1/22/1995	1	36	590	31	2	2
Petty Gulf	1/22/1995	2	34	600	35	2	2
Petty Gulf	1/22/1995	3	30	550	35	2	2
Petty Gulf	2/20/1995	1	35	570	31	2	2
Petty Gulf	2/20/1995	2	36	590	31	2	2
Petty Gulf	2/20/1995	3	34	600	30	2	2
Petty Gulf	3/11/1995	1	34	510	19	2.5	2.5
Petty Gulf	3/11/1995	2	33	590	20	2.5	2.5
Petty Gulf	3/11/1995	3	34	540	20	2.5	2.5
Petty Gulf	9/6/1995	1	38	450	21	3.5	3.5
Petty Gulf	9/6/1995	2	35	410	14	3.5	3.5
Petty Gulf	9/6/1995	3	31	430	16	4	4
Petty Gulf	11/19/1995	1	30	350	5	4	4
Petty Gulf	11/19/1995	2	30	400	4	4.5	4.5
Petty Gulf	11/19/1995	3	27	400	5	4.5	4.5
Petty Gulf	12/16/1995	1	28	390	8	5.5	5.5
Petty Gulf	12/16/1995	2	33	400	8	7	7
Petty Gulf	12/16/1995	3	34	440	7	6	6
Petty Gulf	6/28/1997	1	20	330	3	5	5
Petty Gulf	6/28/1997	2	23	320	7	5	5
Petty Gulf	6/28/1997	3	32	430	10	5	5
Petty Gulf	7/26/1997	1	15	290	4	7	7
Petty Gulf	7/26/1997	2	17	310	5	6.5	6.5
Petty Gulf	7/26/1997	3	15	390	4	.	Bottom(6.0)
Petty Gulf	8/21/1997	1	17	400	7	6	6
Petty Gulf	8/21/1997	2	19	490	7	6.5	6.5
Petty Gulf	8/21/1997	3	34	570	17	4.5	4.5
Petty Gulf	9/28/1997	1	26	530	10	4.5	4.5
Petty Gulf	9/28/1997	2	26	350	15	4	4
Petty Gulf	9/28/1997	3	22	500	12	4	4
Petty Gulf	10/23/1997	1	18	410	6	8	8
Petty Gulf	10/23/1997	2	16	400	5	8	8
Petty Gulf	10/23/1997	3	18	350	5	.	Bottom(7.5)
Petty Gulf	3/14/1998	1	22	290	8	4	4
Petty Gulf	3/14/1998	2	22	510	5	4	4
Petty Gulf	3/14/1998	3	21	410	6	3.5	3.5
Petty Gulf	4/19/1998	1	10	540	4	6.5	6.5
Petty Gulf	4/19/1998	2	10	320	4	7	7
Petty Gulf	4/19/1998	3	11	360	5	6	6
Petty Gulf	10/25/1998	1	14	290	6	7	7
Petty Gulf	10/25/1998	2	12	290	3	.	Bottom(8.0)
Petty Gulf	10/25/1998	3	9	290	2	.	Bottom(7.0)
Petty Gulf	4/16/1999	1	10	280	2	7	7
Petty Gulf	4/16/1999	2	9	290	4	7	7
Petty Gulf	4/16/1999	3	8	270	2	.	Bottom(6.0)
Petty Gulf	5/2/1999	1	11	360	2	.	Bottom(5.0)
Petty Gulf	5/2/1999	2	11	200	2	7	7
Petty Gulf	5/2/1999	3	13	250	3	5.5	5.5
Petty Gulf	5/23/1999	1	11	260	5	5	5
Petty Gulf	5/23/1999	2	8	260	4	.	Weeds(6.0)
Petty Gulf	5/23/1999	3	6	250	2	.	Bottom(5.0)
Petty Gulf	7/25/1999	1	27	400	13	4	4
Petty Gulf	7/25/1999	2	24	340	12	4.5	4.5
Petty Gulf	7/25/1999	3	19	350	6	.	.
Petty Gulf	8/31/1999	1	32	620	18	3	3
Petty Gulf	8/31/1999	2	31	560	20	3	3
Petty Gulf	8/31/1999	3	27	610	15	3	3
Petty Gulf	9/30/1999	1	27	580	24	2.8	2.8
Petty Gulf	9/30/1999	2	16	590	22	2.9	2.9
Petty Gulf	9/30/1999	3	27	580	25	2.6	2.6
Petty Gulf	8/13/2001	1	24	400	19	5	5
Petty Gulf	8/13/2001	2	17	440	9	6	6
Petty Gulf	8/13/2001	3	19	420	30	3.5	3.5
Petty Gulf	9/15/2001	1	28	380	48	4.5	4.5
Petty Gulf	9/15/2001	2	13	250	10	4	4
Petty Gulf	9/15/2001	3	13	310	11	5.5	5.5
Petty Gulf	10/15/2001	1	26	290	162	1.5	1.5
Petty Gulf	10/15/2001	2	9	210	3	9	9
Petty Gulf	10/15/2001	3	9	250	10	.	Bottom(8.0)

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Petty Gulf	11/18/2001	1	10	180	2	.	Bottom(5.5)
Petty Gulf	11/18/2001	2	8	220	2	9	9
Petty Gulf	11/18/2001	3	8	180	1	7	7
Petty Gulf	12/9/2001	1	12	180	.	.	Bottom(5.0)
Petty Gulf	12/9/2001	2	8	170	2	8	8
Petty Gulf	12/9/2001	3	10	180	1	6.5	6.5
Petty Gulf	1/12/2002	1	10	270	9	.	Weeds(3.5)
Petty Gulf	1/12/2002	2	7	250	2	.	Weeds(10.0)
Petty Gulf	1/12/2002	3	8	230	2	.	Weeds(6.0)
Petty Gulf	2/16/2002	1	13	170	1	4.5	4.5
Petty Gulf	2/16/2002	2	9	170	1	10	10
Petty Gulf	2/16/2002	3	9	210	1	5	5
Petty Gulf	3/10/2002	1	24	280	3	3.8	3.8
Petty Gulf	3/10/2002	2	37	310	3	5	5
Petty Gulf	3/10/2002	3	22	250	4	5	5
Petty Gulf	4/19/2002	1	11	260	2	.	Weeds(5.0)
Petty Gulf	4/19/2002	2	11	290	2	9	9
Petty Gulf	4/19/2002	3	10	200	2	.	Weeds(4.5)
Petty Gulf	5/19/2002	1	12	270	6	4	4
Petty Gulf	5/19/2002	2	13	330	16	4	4
Petty Gulf	5/19/2002	3	15	250	9	4	4
Petty Gulf	6/27/2002	1	18	330	3	4	4
Petty Gulf	6/27/2002	2	11	300	2	7	7
Petty Gulf	6/27/2002	3	22	350	9	4.5	4.5
Petty Gulf	7/15/2002	1	17	300	6	.	Weeds(4.0)
Petty Gulf	7/15/2002	2	13	480	5	5.5	5.5
Petty Gulf	7/15/2002	3	15	410	5	.	Weeds(4.0)
Petty Gulf	8/26/2002	1	17	300	6	5	5
Petty Gulf	8/26/2002	2	21	370	6	5	5
Petty Gulf	8/26/2002	3	17	340	5	.	.
Petty Gulf	9/19/2002	1	20	310	8	4.5	4.5
Petty Gulf	9/19/2002	2	19	390	6	6	6
Petty Gulf	9/19/2002	3	24	350	9	4.5	4.5
Petty Gulf	10/12/2002	1	17	480	6	4	4
Petty Gulf	10/12/2002	2	26	530	12	5	5
Petty Gulf	10/12/2002	3	30	470	7	6	6
Petty Gulf	11/14/2002	1	23	460	9	3.3	3.3
Petty Gulf	11/14/2002	2	36	480	10	4	4
Petty Gulf	11/14/2002	3	24	480	9	4	4
Petty Gulf	12/16/2002	1	16	560	5	5	5
Petty Gulf	12/16/2002	2	13	630	5	5	5
Petty Gulf	12/16/2002	3	17	410	4	5	5
Petty Gulf	1/26/2003	1	20	530	5	5.8	5.8
Petty Gulf	1/26/2003	2	22	590	5	6	6
Petty Gulf	1/26/2003	3	20	610	4	6.5	6.5
Petty Gulf	2/9/2003	1	20	530	10	4	4
Petty Gulf	2/9/2003	2	21	460	12	4	4
Petty Gulf	2/9/2003	3	18	550	10	4.5	4.5
Petty Gulf	3/11/2003	1	28	530	6	1.5	1.5
Petty Gulf	3/11/2003	2	25	440	7	2	2
Petty Gulf	3/11/2003	3	28	510	7	2.5	2.5
Petty Gulf	4/20/2003	1	17	590	3	.	.
Petty Gulf	4/20/2003	2	19	400	3	.	.
Petty Gulf	4/20/2003	3	16	390	2	.	.
Petty Gulf	5/16/2003	1	23	370	4	.	Bottom(6.0)
Petty Gulf	5/16/2003	2	17	390	4	6.5	6.5
Petty Gulf	5/16/2003	3	17	340	4	5.5	5.5
Petty Gulf	6/30/2003	1	18	310	7	5.5	5.5
Petty Gulf	6/30/2003	2	18	320	5	5.5	5.5
Petty Gulf	6/30/2003	3	17	350	5	5.5	5.5
Petty Gulf	7/20/2003	1	16	340	7	4	4
Petty Gulf	7/20/2003	2	20	340	7	4	4
Petty Gulf	7/20/2003	3	16	290	8	4	4
Petty Gulf	8/29/2003	1	19	600	9	3.5	3.5
Petty Gulf	8/29/2003	2	36	430	9	3.5	3.5
Petty Gulf	8/29/2003	3	23	390	12	3	3
Petty Gulf	9/18/2003	1	24	380	12	3	3
Petty Gulf	9/18/2003	2	23	380	14	3	3
Petty Gulf	9/18/2003	3	26	430	13	3	3
Petty Gulf	10/26/2003	1	18	440	8	5	5
Petty Gulf	10/26/2003	2	27	280	12	5.5	5.5

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Petty Gulf	10/26/2003	3	24	380	10	5	5
Petty Gulf	11/21/2003	1	20	340	7	5	5
Petty Gulf	11/21/2003	2	19	340	7	5	5
Petty Gulf	11/21/2003	3	20	350	7	5.5	5.5
Petty Gulf	12/28/2003	1	19	340	4	6	6
Petty Gulf	12/28/2003	2	21	410	5	5.5	5.5
Petty Gulf	12/28/2003	3	25	430	12	5.5	5.5
Pine Hill	2/27/1993	1	17	290	3	7	7
Pine Hill	2/27/1993	2	18	290	2	.	Bottom(4.7)
Pine Hill	2/27/1993	3	16	320	2	.	Bottom(5.3)
Pine Hill	4/4/1993	1	16	390	2	.	Bottom(6.0)
Pine Hill	4/4/1993	2	17	380	2	.	Bottom(5.5)
Pine Hill	4/4/1993	3	14	330	2	.	Bottom(8.8)
Pine Hill	5/8/1993	1	13	410	2	.	Bottom(5.3)
Pine Hill	5/8/1993	2	9	320	2	.	Bottom(4.8)
Pine Hill	5/8/1993	3	10	330	2	.	Bottom(7.3)
Pine Hill	5/31/1993	1	14	320	3	.	Bottom(5.3)
Pine Hill	5/31/1993	2	14	340	3	.	Bottom(5.0)
Pine Hill	5/31/1993	3	12	320	3	6.8	6.8
Pine Hill	7/15/1993	1	18	470	5	.	Bottom(5.0)
Pine Hill	7/15/1993	2	15	460	6	4.5	4.5
Pine Hill	7/15/1993	3	17	470	10	.	Bottom(7.0)
Pine Hill	9/6/1993	1	.	.	4	.	Bottom(4.3)
Pine Hill	9/6/1993	2	.	.	5	3.5	3.5
Pine Hill	9/6/1993	3	.	.	6	4	4
Pine Hill	3/6/1994	1	30	430	2	4.9	4.9
Pine Hill	3/6/1994	2	29	390	2	4.6	4.6
Pine Hill	3/6/1994	3	43	590	2	5.5	5.5
Pine Hill	5/8/1994	1	10	420	1	.	Bottom(6.0)
Pine Hill	5/8/1994	2	10	350	1	.	Bottom(5.5)
Pine Hill	5/8/1994	3	11	360	1	.	Bottom(9.0)
Pine Hill	5/30/1994	1	13	400	2	.	Bottom(5.0)
Pine Hill	5/30/1994	2	14	350	1	.	Bottom(4.8)
Pine Hill	5/30/1994	3	15	370	1	.	Bottom(9.5)
Pine Hill	7/4/1994	1	18	410	8	6	6
Pine Hill	7/4/1994	2	19	490	7	6.3	6.3
Pine Hill	7/4/1994	3	16	430	6	6	6
Pine Hill	8/9/1994	1	18	470	5	6.3	6.3
Pine Hill	8/9/1994	2	18	500	6	6	6
Pine Hill	8/9/1994	3	18	450	6	5.3	5.3
Pine Hill	9/18/1994	1	15	340	5	5.3	5.3
Pine Hill	9/18/1994	2	15	320	5	.	Bottom(5.7)
Pine Hill	9/18/1994	3	15	340	5	8.5	8.5
Pine Hill	10/30/1994	1	16	340	11	6	6
Pine Hill	10/30/1994	2	15	280	13	5.8	5.8
Pine Hill	10/30/1994	3	12	310	13	5.3	5.3
Pine Hill	11/27/1994	1	12	300	5	.	Bottom(6.8)
Pine Hill	11/27/1994	2	10	320	5	.	Bottom(6.5)
Pine Hill	11/27/1994	3	11	300	4	.	Bottom(8.3)
Pine Hill	1/2/1995	1	15	340	5	.	Bottom(6.8)
Pine Hill	1/2/1995	2	14	340	5	.	Bottom(6.5)
Pine Hill	1/2/1995	3	15	350	7	8.5	8.5
Pine Hill	2/26/1995	1	14	310	1	.	Bottom(5.5)
Pine Hill	2/26/1995	2	12	310	2	.	Bottom(5.0)
Pine Hill	2/26/1995	3	14	300	1	7	7
Pine Hill	4/23/1995	1	12	280	1	.	Bottom(5.5)
Pine Hill	4/23/1995	2	11	410	1	.	Bottom(5.8)
Pine Hill	4/23/1995	3	13	290	1	.	Bottom(8.7)
Pine Hill	6/25/1995	1	14	410	3	.	Bottom(6.1)
Pine Hill	6/25/1995	2	13	370	3	.	Bottom(5.8)
Pine Hill	6/25/1995	3	13	420	3	7	7
Pine Hill	8/20/1995	1	14	520	11	5.3	5.3
Pine Hill	8/20/1995	2	13	510	10	5.5	5.5
Pine Hill	8/20/1995	3	19	540	12	4.5	4.5
Pine Hill	10/8/1995	1	21	550	7	5.5	5.5
Pine Hill	10/8/1995	2	18	540	7	5.5	5.5
Pine Hill	10/8/1995	3	21	540	7	5	5
Pine Hill	12/3/1995	1	19	480	5	.	Bottom(5.5)
Pine Hill	12/3/1995	2	16	450	4	.	Bottom(5.5)
Pine Hill	12/3/1995	3	19	340	5	6.5	6.5
Pine Hill	2/25/1996	1	20	630	2	.	Bottom(7.0)

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Pine Hill	2/25/1996	2	16	370	2	.	Weeds(5.8)
Pine Hill	2/25/1996	3	19	470	2	.	Bottom(7.8)
Pine Hill	1/26/1997	1	16	370	5	.	Bottom(5.5)
Pine Hill	1/26/1997	2	23	420	5	6	6
Pine Hill	1/26/1997	3	19	370	5	7.5	7.5
Pine Hill	2/17/1997	1	20	400	4	4.5	4.5
Pine Hill	2/17/1997	2	20	370	4	5	5
Pine Hill	2/17/1997	3	21	370	4	6.8	6.8
Pine Hill	3/23/1997	1	22	410	4	6.5	6.5
Pine Hill	3/23/1997	2	25	360	4	.	Bottom(6.5)
Pine Hill	3/23/1997	3	25	400	3	.	Bottom(6.8)
Pine Hill	4/20/1997	1	23	410	2	.	Bottom(4.5)
Pine Hill	4/20/1997	2	25	490	2	.	Bottom(6.0)
Pine Hill	4/20/1997	3	18	380	2	.	Bottom(7.0)
Pine Hill	5/18/1997	1	16	420	6	.	Bottom(4.0)
Pine Hill	5/18/1997	2	16	380	5	.	Bottom(6.5)
Pine Hill	5/18/1997	3	19	440	5	.	Bottom(8.0)
Pine Hill	6/22/1997	1	13	440	3	.	Bottom(4.0)
Pine Hill	6/22/1997	2	13	400	3	.	Bottom(6.0)
Pine Hill	6/22/1997	3	17	480	3	.	Bottom(7.0)
Pine Hill	7/27/1997	1	22	360	4	.	Bottom(5.0)
Pine Hill	7/27/1997	2	20	440	5	.	Bottom(5.5)
Pine Hill	7/27/1997	3	15	420	5	.	Bottom(6.8)
Pine Hill	8/17/1997	1	15	440	6	.	Bottom(5.0)
Pine Hill	8/17/1997	2	16	490	6	.	Bottom(5.8)
Pine Hill	8/17/1997	3	18	480	5	.	Bottom(7.0)
Pine Hill	9/21/1997	1	20	530	7	.	Bottom(4.0)
Pine Hill	9/21/1997	2	35	680	7	.	Bottom(5.0)
Pine Hill	9/21/1997	3	24	640	6	.	Bottom(6.5)
Pine Hill	10/19/1997	1	30	490	8	.	Bottom(3.5)
Pine Hill	10/19/1997	2	25	560	8	.	Bottom(5.0)
Pine Hill	10/19/1997	3	25	490	9	.	Bottom(6.0)
Pine Hill	11/23/1997	1	25	470	5	.	Bottom(4.0)
Pine Hill	11/23/1997	2	26	370	4	.	Bottom(5.3)
Pine Hill	11/23/1997	3	20	510	4	.	Bottom(7.0)
Pine Hill	12/21/1997	1	18	440	7	.	Bottom(4.8)
Pine Hill	12/21/1997	2	21	510	5	.	Bottom(6.0)
Pine Hill	12/21/1997	3	24	540	7	.	Bottom(6.8)
Pine Hill	1/25/1998	1	29	430	7	4	4
Pine Hill	1/25/1998	2	29	490	7	5	5
Pine Hill	1/25/1998	3	25	430	7	5.3	5.3
Pine Hill	2/15/1998	1	19	340	6	.	Bottom(5.5)
Pine Hill	2/15/1998	2	30	450	5	.	Bottom(6.0)
Pine Hill	2/15/1998	3	25	390	4	.	Bottom(7.0)
Pine Hill	3/15/1998	1	22	410	5	4	4
Pine Hill	3/15/1998	2	23	300	5	4	4
Pine Hill	3/15/1998	3	24	330	5	4	4
Pine Hill	4/26/1998	1	13	340	7	.	Bottom(4.5)
Pine Hill	4/26/1998	2	16	340	5	.	Bottom(6.0)
Pine Hill	4/26/1998	3	12	300	4	.	Bottom(7.0)
Pine Hill	5/24/1998	1	22	430	5	.	Bottom(3.5)
Pine Hill	5/24/1998	2	15	380	5	.	Bottom(6.0)
Pine Hill	5/24/1998	3	15	370	6	.	Bottom(6.8)
Pine Hill	6/20/1998	1	18	370	4	.	Bottom(3.5)
Pine Hill	6/20/1998	2	16	460	4	.	Bottom(5.8)
Pine Hill	6/20/1998	3	13	430	4	.	Bottom(6.0)
Pine Hill	7/12/1998	1	15	500	5	.	Bottom(3.0)
Pine Hill	7/12/1998	2	20	450	4	.	Bottom(5.0)
Pine Hill	7/12/1998	3	20	560	5	.	Bottom(6.0)
Pine Hill	8/23/1998	1	26	650	12	5	5
Pine Hill	8/23/1998	2	32	620	11	5.5	5.5
Pine Hill	8/23/1998	3	27	650	14	5	5
Pine Hill	9/27/1998	1	25	520	11	.	Bottom(4.0)
Pine Hill	9/27/1998	2	27	480	11	5	5
Pine Hill	9/27/1998	3	28	420	9	5	5
Pine Hill	10/25/1998	1	19	480	7	.	Bottom(4.0)
Pine Hill	10/25/1998	2	23	420	7	.	Bottom(7.0)
Pine Hill	10/25/1998	3	20	540	7	.	Bottom(7.0)
Pine Hill	11/22/1998	1	16	470	6	.	Bottom(3.3)
Pine Hill	11/22/1998	2	16	380	5	.	Bottom(6.0)
Pine Hill	11/22/1998	3	14	440	5	.	Bottom(7.0)

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Pine Hill	2/15/1999	1	17	500	5	.	Bottom(5.3)
Pine Hill	2/15/1999	2	17	390	3	.	Bottom(7.0)
Pine Hill	2/15/1999	3	17	340	3	.	Bottom(6.8)
Pine Hill	3/13/1999	1	21	390	5	.	Bottom(5.0)
Pine Hill	3/13/1999	2	20	300	5	.	Bottom(6.5)
Pine Hill	3/13/1999	3	25	280	4	.	Bottom(6.5)
Pine Hill	4/24/1999	1	20	350	3	.	Bottom(4.0)
Pine Hill	4/24/1999	2	24	470	3	.	Bottom(6.3)
Pine Hill	4/24/1999	3	19	330	3	.	Bottom(6.8)
Pine Hill	5/16/1999	1	21	360	5	.	Bottom(4.5)
Pine Hill	5/16/1999	2	17	300	4	.	Bottom(6.5)
Pine Hill	5/16/1999	3	17	490	4	.	Bottom(6.5)
Pine Hill	6/20/1999	1	17	520	5	.	Bottom(4.0)
Pine Hill	6/20/1999	2	15	510	5	.	Bottom(5.0)
Pine Hill	6/20/1999	3	16	520	5	.	Bottom(7.0)
Pine Hill	7/24/1999	1	24	490	5	.	Bottom(4.0)
Pine Hill	7/24/1999	2	21	440	4	.	Bottom(6.8)
Pine Hill	7/24/1999	3	18	440	5	6.8	6.8
Pine Hill	8/21/1999	1	18	580	7	.	Bottom(4.0)
Pine Hill	8/21/1999	2	16	420	6	.	Bottom(6.0)
Pine Hill	8/21/1999	3	18	470	6	.	Bottom(6.8)
Pine Hill	9/26/1999	1	24	510	9	5.5	5.5
Pine Hill	9/26/1999	2	20	400	10	5	5
Pine Hill	9/26/1999	3	20	420	10	.	Bottom(4.3)
Pine Hill	11/21/1999	1	17	470	6	.	Bottom(3.5)
Pine Hill	11/21/1999	2	18	460	7	.	Bottom(5.0)
Pine Hill	11/21/1999	3	17	460	7	.	Bottom(6.5)
Pine Hill	12/26/1999	1	17	500	4	.	Bottom(3.8)
Pine Hill	12/26/1999	2	15	480	4	.	Bottom(6.8)
Pine Hill	12/26/1999	3	16	510	4	6.8	6.8
Pine Hill	1/17/2000	1	21	500	2	.	Bottom(3.8)
Pine Hill	1/17/2000	2	24	540	2	.	Bottom(5.0)
Pine Hill	1/17/2000	3	23	540	2	.	Bottom(6.3)
Pine Hill	3/26/2000	1	19	530	4	.	Bottom(5.5)
Pine Hill	3/26/2000	2	21	510	4	.	Bottom(6.5)
Pine Hill	3/26/2000	3	20	520	4	.	Bottom(6.5)
Pine Hill	4/30/2000	1	27	500	8	.	Bottom(4.3)
Pine Hill	4/30/2000	2	26	510	7	5.5	5.5
Pine Hill	4/30/2000	3	26	490	7	4.5	4.5
Pine Hill	5/21/2000	1	20	560	7	.	Bottom(4.0)
Pine Hill	5/21/2000	2	22	550	7	5	5
Pine Hill	5/21/2000	3	22	540	8	5.5	5.5
Pine Hill	6/25/2000	1	16	410	5	.	Bottom(3.5)
Pine Hill	6/25/2000	2	14	530	3	.	Bottom(6.0)
Pine Hill	6/25/2000	3	15	540	3	.	Bottom(6.5)
Pine Hill	8/20/2000	1	27	540	14	4.3	4.3
Pine Hill	8/20/2000	2	27	500	14	4.5	4.5
Pine Hill	8/20/2000	3	26	520	19	4.3	4.3
Pine Hill	1/18/2001	1	13	.	.	.	.
Pine Hill	8/13/2001	1	20	610	7	.	Bottom(6.0)
Pine Hill	8/13/2001	2	18	590	8	.	Bottom(6.0)
Pine Hill	8/13/2001	3	16	390	8	5.5	5.5
Pine Hill	9/15/2001	1	20	440	7	5.5	5.5
Pine Hill	9/15/2001	2	18	340	7	5	5
Pine Hill	9/15/2001	3	19	290	8	5	5
Pine Hill	10/15/2001	1	20	350	5	5	5
Pine Hill	10/15/2001	2	19	360	4	5	5
Pine Hill	10/15/2001	3	16	390	5	7	7
Pine Hill	11/18/2001	1	13	480	1	.	Bottom(4.0)
Pine Hill	11/18/2001	2	23	410	2	.	Bottom(5.5)
Pine Hill	11/18/2001	3	17	340	2	.	Bottom(4.5)
Pine Hill	12/9/2001	1	15	330	2	.	Bottom(5.0)
Pine Hill	12/9/2001	2	15	290	2	.	Bottom(7.0)
Pine Hill	12/9/2001	3	14	250	2	.	Bottom(7.0)
Pine Hill	1/13/2002	1	32	330	5	.	Bottom(6.0)
Pine Hill	1/13/2002	2	22	330	6	4.5	4.5
Pine Hill	1/13/2002	3	19	440	5	5.5	5.5
Pine Hill	2/16/2002	1	13	280	2	.	Bottom(6.0)
Pine Hill	2/16/2002	2	14	260	2	.	Bottom(6.0)
Pine Hill	2/16/2002	3	14	330	2	.	Bottom(8.0)
Pine Hill	3/10/2002	1	17	260	3	.	Bottom(6.0)

Lake	Date	Station	TP (ug/L)	TN (ug/L)	CHL A (ug/L)	SECCHI (ft)	SECCHI 2
Pine Hill	3/10/2002	2	18	240	5	5.5	5.5
Pine Hill	3/10/2002	3	18	320	4	5.5	5.5
Pine Hill	4/19/2002	1	12	270	2	.	Bottom(5.5)
Pine Hill	4/19/2002	2	11	340	2	.	Bottom(5.5)
Pine Hill	4/19/2002	3	13	280	2	.	Bottom(6.5)
Pine Hill	5/1/2002	1	14	370	4	7	7
Pine Hill	5/1/2002	2	15	300	4	.	Bottom(4.0)
Pine Hill	5/1/2002	3	18	350	4	.	Bottom(4.5)
Pine Hill	5/21/2002	1	13	320	3	.	.
Pine Hill	5/21/2002	2	15	290	2	.	.
Pine Hill	5/21/2002	3	13	370	2	.	Bottom(5.0)
Pine Hill	6/19/2002	1	13	400	6	.	Weeds(6.0)
Pine Hill	6/19/2002	2	14	380	7	.	Bottom(4.5)
Pine Hill	6/19/2002	3	13	440	6	.	Bottom(6.0)
Pine Hill	7/20/2002	1	19	480	10	4	4
Pine Hill	7/20/2002	2	16	450	9	.	Bottom(4.0)
Pine Hill	7/20/2002	3	15	400	9	.	Bottom(5.0)
Pine Hill	8/15/2002	1	17	500	12	5	5
Pine Hill	8/15/2002	2	23	610	13	4	4
Pine Hill	8/15/2002	3	18	470	12	5	5
Pine Hill	9/17/2002	1	19	510	8	.	Bottom(6.0)
Pine Hill	9/17/2002	2	19	510	6	4	4
Pine Hill	9/17/2002	3	20	640	7	.	Bottom(6.0)
Pine Hill	10/19/2002	1	20	450	7	.	Weeds(5.0)
Pine Hill	10/19/2002	2	21	540	7	.	Bottom(4.0)
Pine Hill	10/19/2002	3	22	450	6	6	6
Pine Hill	11/14/2002	1	23	570	9	.	.
Pine Hill	11/14/2002	2	22	580	9	.	.
Pine Hill	11/14/2002	3	24	630	9	.	.
Pine Hill	12/11/2002	1	23	600	10	5.5	5.5
Pine Hill	12/11/2002	2	23	600	10	.	Bottom(4.0)
Pine Hill	12/11/2002	3	25	620	9	.	Bottom(4.5)
Pine Hill	1/15/2003	1	25	630	11	4.5	4.5
Pine Hill	1/15/2003	2	21	630	11	4.5	4.5
Pine Hill	1/15/2003	3	21	610	10	4.5	4.5
Pine Hill	2/19/2003	1	24	550	5	4	4
Pine Hill	2/19/2003	2	25	630	5	4	4
Pine Hill	2/19/2003	3	26	590	5	4	4
Pine Hill	3/16/2003	1	23	570	6	6	6
Pine Hill	3/16/2003	2	37	610	9	.	Weeds(4.0)
Pine Hill	3/16/2003	3	21	470	6	.	Weeds(5.0)
Pine Hill	4/15/2003	1	18	360	3	.	Bottom(5.5)
Pine Hill	4/15/2003	2	23	440	3	.	Bottom(4.5)
Pine Hill	4/15/2003	3	21	450	3	.	Bottom(5.5)
Pine Hill	5/16/2003	1	20	470	7	.	Weeds(5.0)
Pine Hill	5/16/2003	2	19	410	6	.	Bottom(4.0)
Pine Hill	5/16/2003	3	18	380	6	.	Weeds(4.0)
Pine Hill	6/15/2003	1	15	300	4	.	Weeds(4.5)
Pine Hill	6/15/2003	2	16	280	4	.	Bottom(4.5)
Pine Hill	6/15/2003	3	14	290	4	6	6
Pine Hill	7/15/2003	1	15	560	4	7	7
Pine Hill	7/15/2003	2	18	400	4	5	5
Pine Hill	7/15/2003	3	25	510	4	.	Weeds(5.0)
Pine Hill	8/18/2003	1	16	480	10	.	Bottom(5.0)
Pine Hill	8/18/2003	2	19	450	8	.	Bottom(4.0)
Pine Hill	8/18/2003	3	18	440	9	5.5	5.5
Pine Hill	9/13/2003	1	25	440	7	.	Bottom(7.5)
Pine Hill	9/13/2003	2	31	460	25	.	Bottom(4.0)
Pine Hill	9/13/2003	3	32	410	17	.	Weeds(5.0)
Pine Hill	10/19/2003	1	18	470	6	.	Weeds(7.5)
Pine Hill	10/19/2003	2	17	510	6	4	4
Pine Hill	10/19/2003	3	18	350	11	5	5
Pine Hill	11/16/2003	1	12	360	3	.	Weeds(7.5)
Pine Hill	11/16/2003	2	21	450	6	.	Weeds(4.0)
Pine Hill	11/16/2003	3	14	330	6	.	Bottom(5.5)
Pine Hill	12/16/2003	1	16	500	3	8	8
Pine Hill	12/16/2003	2	16	370	4	.	Bottom(5.0)
Pine Hill	12/16/2003	3	14	380	4	.	Bottom(5.0)

APPENDIX B

Summary and Description of Killearn Lakes

Lake Arrowhead- has high numbers of yoy threadfin shad and good numbers of smaller sized largemouth bass and bluegill. The panfish (bluegill and shellcracker) population is dominated by intermediate sized fish. Several large golden shiners, 7-8 inches, were observed in 2003-04. There is a significant lack of fish habitat or structure in the lake. Sediments/silt are still coming into both ends of the lake from storm water runoff discharge pipes. There are large plumes of sand/silt in front of two primary pipes entering the lake. Dense microscopic algae dominate the aquatic plant life. This lake experiences period dense algae blooms in late spring or early summer. A fish kill occurred on July 14, 1998 when dissolved oxygen levels dipped below 1.5 ppm. Water levels were slightly lower in 2003 and aquatic vegetation, Pennywort and Chara are beginning to return to shore. There are no immediate aquatic vegetation problems at this time. Two stems of hydrilla, exotic submersed vegetation, were found Oct 5, 2002. There have been no other hydrilla observations since fall of 2002. This lake is a candidate for a future aeration system or fountain, which may be helpful in the future. Average water depth is < 5 feet. The potential for 100% aquatic vegetation coverage is very high without grass carp. The last stocking of triploid grass carp (N = 100) occurred in February 1995 (Table 1).

Needs:
- Sediment removal in at least two plume areas beneath discharge pipes.
- Consider re-stocking 70 – 100 grass carp in 2004-05.
- Introduce cover in the form of anchored oak trees.
- Fishery potential is good for catch and release of smaller sized bass.
- The gate valve rod of the overflow structure needs replaced.
- Flooding over the dam occurs during heavy rains and grass carp and other fish may escape into the wooded wetland.
- Maintain the kids fishing dock and parking for recreational users.
- Bluegill should be fed with artificial catfish feed from docks.
- Develop Sediment Management Plan including drawdown time frames.
- Secure funding for sewage and a modified storm water system.

Lake Pine Hill has low numbers of all fish species except for golden shiners. Numbers and size of bass, bluegill, and redear sunfish are improving based on preliminary fishery data in 2004. Largemouth bass weights and general conditions are poor. Lake Pine Hill has the best over all water quality in the chain of lakes with respect to low nutrient levels. Water clarity is usually greater than 5 feet. *Chara* (algae) covers 60 –70 % of the lake bottom, some lily pads are returning (*Nymphaea, Nuphar spp. and, Brasenia*, or water shield) to the littoral zone. *Lemon bacopa* is established in much of the littoral zone shoreline. A 3-5 foot band of torpedo grass *(Panicum repens*) has become well established around the shoreline of the lake and provides some cover for juvenile bass and forage fish such as golden shiners. Small amounts of hydrilla are found but confined to the southern end where Pine Hill connects to Pettygulf. Threadfin shad have disappeared since 2002. There are good numbers of adult shellcrackers and golden shiners. Aquatic vegetation coverage (primarily Chara and Lemon Bacopa) have increased significantly from < 20% to 60% coverage since 2001. The average water depth is < 5 feet. Potential for 100% aquatic vegetation coverage is very high. The last triploid grass carp (N = 100) were stocked in October 2002 (Table 1). This lake is

bordered and protected by a large plantation, which has remained relatively undeveloped through May 2004.

Needs: Introduce cover in the form of anchored oak trees.
Fishery potential is average for smaller sized bass and bluegill
Over-flow structure is extremely old and should not be opened.
Monitor expanding aquatic plants such as torpedo grass and hydrilla.
The canal leading to Lake Pettygulf may need to be dredged eventually on both sides of the Deer Lake Road.
Lake Pine Hill Park has no fishing access to deep water.
Bluegill should be fed with artificial catfish feed from docks.
Funding for a new sewage and modified storm water system.

Petty Gulf has the exotic plant, hydrilla, which became established in 2000. It was successfully treated with the herbicide Sonar in May of 2000 and again in 2002. Hydrilla was found growing in 13 feet of water and covering up to 80% of the surface area of the lake in 2000 and 2002. Insufficient numbers of grass carp (< 10/acre) were unable to control the re-growth of hydrilla in 2001. In 2002, many homeowners complained again about dense plant coverage, aesthetics, and poor recreational opportunities on the lake. During 2004, other aquatic plant species observed included torpedo grass, southern naiad, Chara, lemon bacopa, and water hyacinths.

Pettygulf has high numbers of small and intermediated size bass (7-15 inches) along with high numbers of 2-6 inch bluegill, golden shiners, observed along the torpedo grass in 2003-04. Bass and bream population are average, and the young of year (yoy) golden shiners and bass are numerous because of the extensive vegetation. Recreational opportunities will increase if the grass carp can control the hydrilla re-growth. Submersed structure or fallen trees are needed as fishery habitat. Several 5-12 lb carp were observed during sampling. No threadfin shad were observed in 2003 and 2004.

A small number of water hyacinths, another exotic plant, were observed near the dam in 2003. These purpled flowering floating plants were treated and removed. However, in 2004 these nusiance plants returned and were lightly scattered around the shoreline of the lake. A small herbicide treatment (2 4-D) for water hyacinths was completed in August 2002 and again in May 2004. The last stocking of triploid grass carp (N = 300) occurred in November 2001 (Table 1). Storm water runoff from the far end of the lake carries high sediments loads and trash into the lake from the latest development in the area. Hydrilla is also being discharged into the 85 acre Lake Diane during high flow rain events. Future costs to control hydrilla with Sonar in all lakes could be $10,000 or more on a regular schedule. We are currently getting about a 2-year control period for each Sonar treatment in Lake Petty Gulf. Unfortunately, hydrilla appears to be resistant to Sonar after repeated treatments in other systems. High numbers of triploid grass carp remains a viable option to control hydrilla in the future. Average water depth is > 6 feet with depths up to 14 feet near the dam. Hydrilla has the potential to cover 80% of the lake's surface area.

Needs: Confine hydrilla to Lake Petty Gulf if possible and manage when feasible.

Reduce the amount of sediments entering the lake.
Introduce cover in the form of anchored oak trees.
The gate valve rod of the overflow structure needs replaced.
Closely monitor hydrilla abundance and distribution in 2004
Shad may need to be re-introduced if hydrilla is kept under control.
Maintain a clean overflow structure so trash does not clog the opening.
The canal connected to Pine Hill may need dredged soon.
Sediments accumulate below the two large discharge pipes and a maintenance plan should be developed.
Bluegill should be fed with artificial catfish feed.
Sewage and modified storm water system.
Fishing access for young anglers.

Blue Heron – Fishery is declining due to the lack of cover and increased sediment and trash entering the lake. The two canals draining the Golden Eagle golf course are rapidly filling in with sediments and nutrients. Filamentous algae is the dominant aquatic vegetation throughout most of the lake in May 2004. Recent drought conditions and significant nutrients from storm water runoff have caused these conditions.

Low numbers of all fish species were observed in 2003 and 2004. Largemouth bass are in poor condition and bluegill are restricted to areas with a few small overhanging limbs or sunken trees. Water clarity has increased due to filamentous algae covering most of the lake bottom. Triploid grass carp were last stocked in December 1996 (N = 250). Potential for 100% aquatic vegetation coverage is very high. Historically southern naiad has historically covered up to 80% of the lake prior to triploid grass carp introduction in 1987. The average water depth < 6 feet. Water depths below discharge pipes range from 2 inches to 2 feet deep. These areas support aquatic vegetation and filamentous algae.

Needs:
Lake Blue Heron has the most sediment accumulation from storm water runoff and it may be loosing capacity to function as a holding pond.
Emergency spillway needs to be moved and replaced with concrete.
The gate valve rod on the over flow structure needs replaced.
The discharge pipe through the dam is eroded on the backside.
Remove sediment plumes near all new discharge pipes.
Additional grass carp may be needed in the near future (2004-05).
Introduce cover in the form of anchored oak trees.
Develop a Sediment Management Plan for the near future.
Bluegill should be fed with artificial catfish feed from docks.
Funding for a new sewage and modified storm water system.
Fishing access for young anglers.

Lake Monkey Business has good numbers of yoy bass, shad, and bluegill hiding in the limited number of trees and submersed logs.. Several 1-5 inch black crappie were observed during samples. These fish compete with bass for food. Adult threadfin shad numbers are good. We observed only a few grass carp. Good numbers of smaller sized

bass and catfish are distributed near structure and or homeowners docks. Channel catfish have become established from annual stockings for the Kids Fishing Events.

Filamentous algae is growing along the shallow shoreline and it has increased since 2001. Lake Monkey Business has a high recreational usage by residents and friends. Limited shoreline aquatic plants are returning. Triploid grass carp have get the aquatic plants low and 200 grass carp were last released in October 2002. The average water depth of Monkey Business is < 6 feet and future plant expansion is very high without grass carp.

Needs:

Sediments need to be removed near the discharge pipes.
Over-flow gate valve rod needs replaced.
The leak in main overflow discharge pipe needs repaired.
Discharge pipe is eroded on the backside of dam.
Introduce cover in the form of anchored oak trees.
Emergency spill way should be re-evaluated.
Bluegill should be fed with artificial catfish feed from docks.
Funding for sewage and modified storm water system.
Silt barriers are not functioning properly and should be repaired or removed.

APPENDIX C

Monitoring of Sediments, Biology (Aquatic Macrophytes) and Stormwater Loading

Sediment Quality

All sediment samples will be taken in triplicate, the top 5 cm homogenized for analysis. All 6 original stations will be sampled once a year for the following parameters (a total of 180 cores).

A. Sediment Depth
B. Sediment Type/Grain Size
C. Depth from sediment/water interface to underlying hard pan
D. Moisture Content of Sediment (mg/kg)
E. Organic Content of Sediment (mg/kg)
F. Inorganic Content of Sediment (mg/kg)
G. Total Kjeldahl Nitrogen (mg/kg, dry weight)
H. Total Phosphorus (mg/kg, dry weight).

Additional Post-Restoration parameters to be added to the existing Leon County Lake Ecology program to compare with previous studies and NPDES Parameters

1. Organics: run by GC/MS Methods 8260 and 8270 (Guidance Manual for the preparation of part 2 of the NPDES permit application for discharges from municipal separate storm sewer systems, EPA 833-B-92-002)
   A. Herbicides (Table II, Appendix D, 40 CFR, Part 122)
   B. Base/Neutral (Table II, Appendix D, 40 CFR, Part 122)
   C. Acid Compounds (Table II, Appendix D, 40 CFR, Part 122)
   D. Pesticides (Table II, Appendix D, 40 CFR, Part 122)
2. Metals: run by ICP-MS, EPA 6010

Sb	Be	Cr	Pb	Ni	Ag	Zn
As	Cd	Cu	Hg	Se	Tl	Cn

Biology (Aquatic Macrophytes)

1. Estimated percent coverage of the lake bottom by submerged and emergent macrophytes within three non-overlapping randomized quadrants.
2. Estimated percent coverage of the lake surface by submerged and emergent macrophytes within three non-overlapping randomized quadrants.
3. Estimated percent total volume of the water column occupied by submerged and emergent macrophytes within three non-overlapping randomized quadrants.
4. Identify the dominant species and two subdominant species of macrophytes occurring at each station. Compare with the annual FDEP SAV survey.
5. Determine the Biomass of the submerged and emergent macrophytes within three non-overlapping randomized quadrants.
6. Algal toxicity bioassays assays may be run on algal blooms in the lakes.
7. Determination of emergent and floating plant cover. KHOA will use volunteers to perform this function.

Comment: Can't we just do this and not have all the other monitoring on plants performed?

Stormwater Loading

Measurement of stormwater loading to the lake will be accomplished through the sampling of at least seven and up to nine storm events over the 36-month monitoring period. The goal of this project component will be to sample three storm events per year. Additionally, a single storm event will be manually (grab samples) sampled for EPA NPDES priority pollutants (pesticides, organics and metals) during beginning of a storm event.

The stormwater water quality samples will be collected using automatic water quality samplers set up on the tributary streams and by the grab sample method. The automatic samplers will collect flow-weighted composite samples using a Handar 555 recorder as the controlling device. The flow-weighted composite samples will be collected in a 2.5 gallon glass bottle in the automatic sampler. These flow-weighted samples will be distributed into the appropriate analyte bottles for delivery to the laboratory.

Auto-Sampler Laboratory Analytes

The laboratory bottles for each stormwater sample include:

WQ Parameters	
W-NO_2NO_3	Nitrate +nitrite analysis of water by Method 353.2
W-TKN	Total Kjeldahl Nitrogen in water samples by Method 351.2
W-TP	Total Phosphorus in water samples by Method 365.4
W-PO_4	Orthophosphate analysis of water samples by Method 365.1
W-TSS	Total suspended solids in water by Method 160.2
W-TDS	Total Dissolved solids in water by Method 160.1

Field Grab Samples

Manual stormwater grab samples will be collected at the monitoring locations on 2-3 storm events during the project. The samples will be collected within the first three hours of the beginning of each storm event to measure temperature, pH, dissolved oxygen, fecal streptococcus, and fecal coliform.

Field meters will be used to measure the measure temperature, pH, dissolved oxygen of the stormwater run-off. The field parameter measurements will be logged on the WQ Sampling Record form with the date, time of the measurements. The bacteriological samples (fecal streptococcus and fecal coliform) will be collected in whirlpacks using grab sample procedures and analyzed at the laboratory.

Grab Sample Lab Parameters	
W-F. Strep.	Fecal Streptococcus in water by Method EPA 600/8-78-017
W-Fecal Coli.	Fecal Coliform in water by Method EPA 600/8-78-017

APPENDIX D

The Killearn Lakes Plantation Chain of Lakes

Trophic State Indices (TSI)

The Lakes within the KLP Chain of Lakes drain into Lake Iamonia from at least two directions. Lake Arrowhead and Lake Monkey Business both directly drain into different parts of Lake Iamonia. Lake Monkey Business drains into Lester Cove and Lake Arrowhead drains into Lake Iamonia at the Cromartie Arm.

Lake Iamonia Outlet is listed as a medium priority TMDL to be accomplished in the year 2007. Thus the KLP Chain of Lakes drains into an impaired waterbody, Lake Iamonia, scheduled for a TMDL in 2007. The various Lakes within the Killearn Chain of Lakes are listed on the planning list as being impaired due to high Trophic State Indices (TSI), low dissolved oxygen (DO), high Turbidity, high Fecal and Total Coliform bacteria. The lakes within the KLP Chain of Lakes were dropped from the TMDL list because of a perceived lack of data. Lake Monkey business was shown to be a source of nutrient enrichment to Lake Iamonia in previous studies (McGlynn, 1997 and McGlynn 1999). In addition to these studies, 10 years of data were collected on each of these lakes by the University of Florida's Lakewatch program show that water quality within these lakes is not satisfactory.

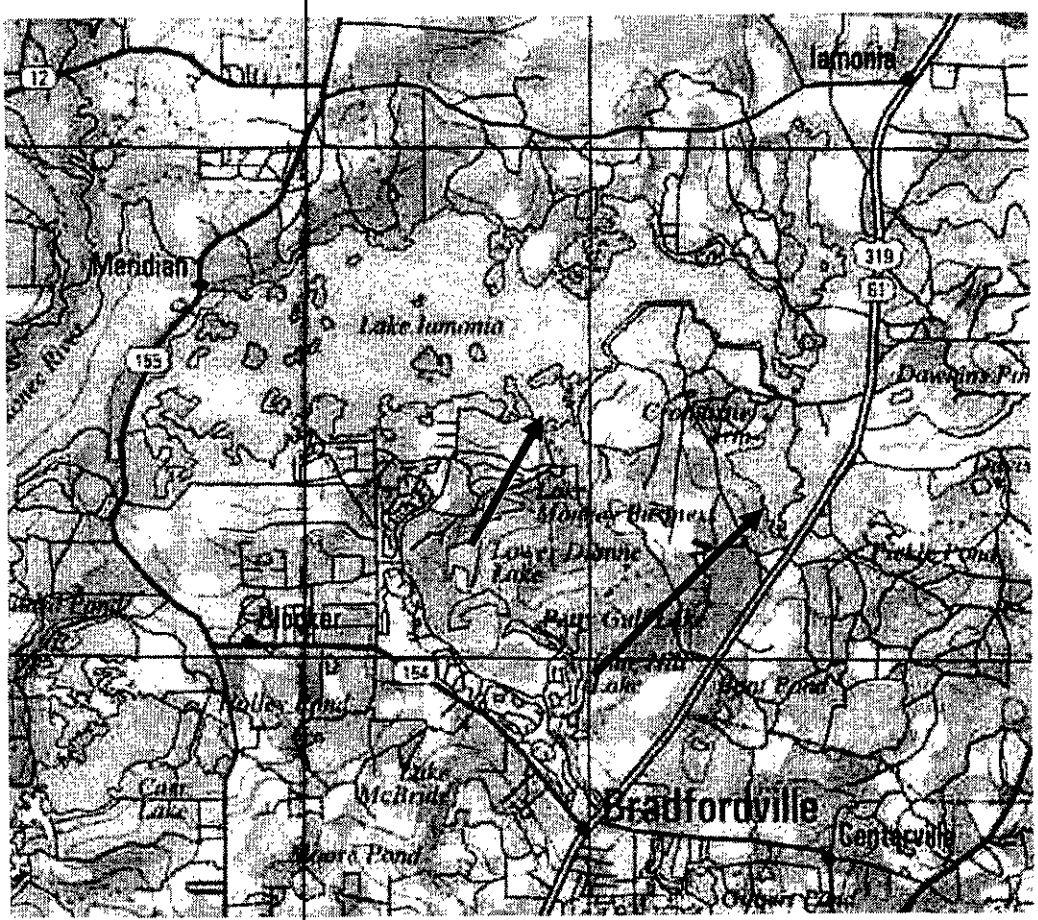

Figure 1: Map of the KLP Chain of Lakes showing the two drainages into lake Iamonia at Lake Monkey Business and Lake Arrowhead.

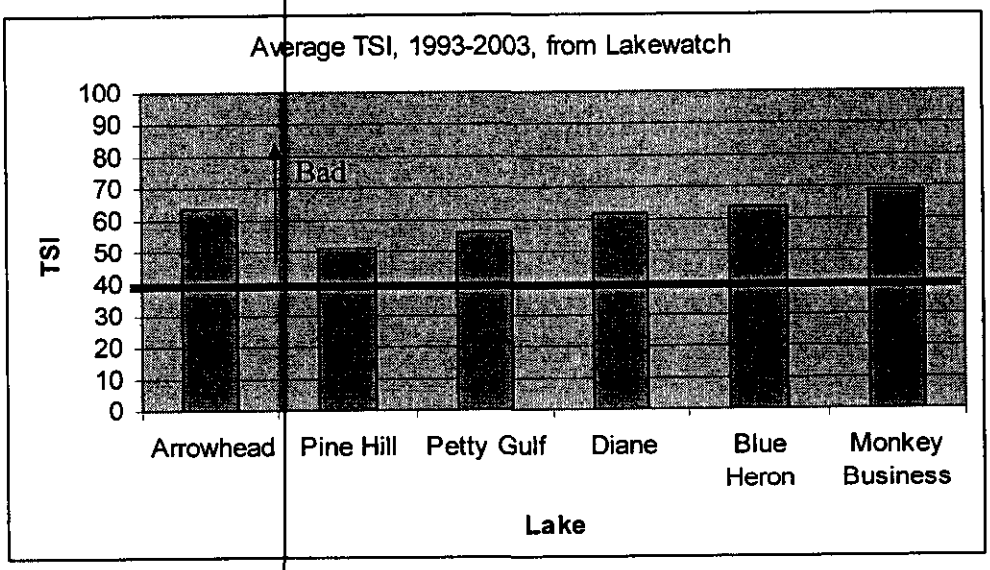

Figure 2: average TSI calculated from LAKEWATCH chlorophyll, total phosphorus and total nitrogen data from 1993 to 2003. Values over 40 are considered impaired for clear lakes by FDEP. All of these lakes are impaired according to their TSI values. Lakes Arrowhead and Monkey Business, the two lakes that discharge into Lake Iamonia are the worst.

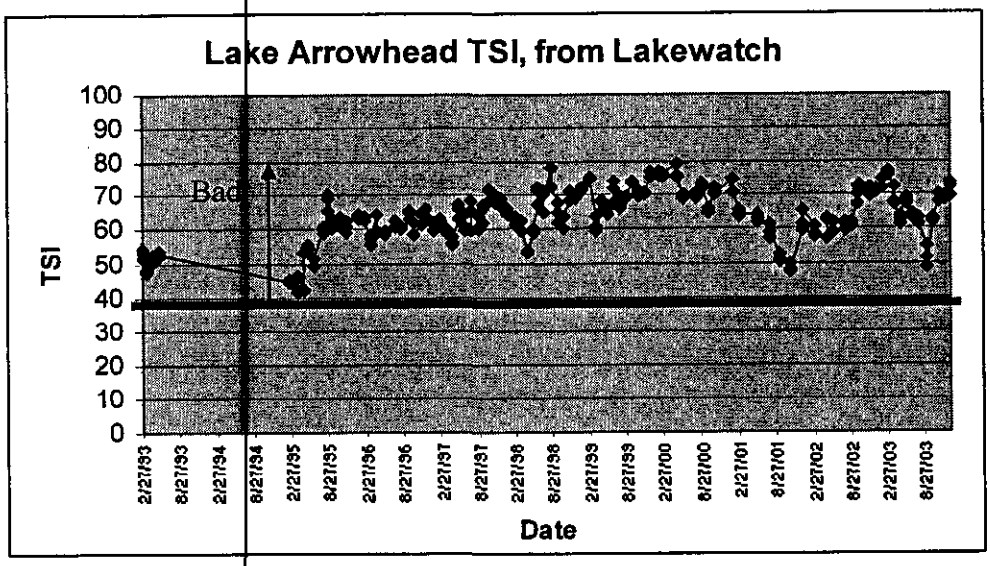

Figure 2: TSI's for Lake Arrowhead are the second highest within the KLP Chain of Lakes. They are not considered good. This Lake discharges into Lake Iamonia.

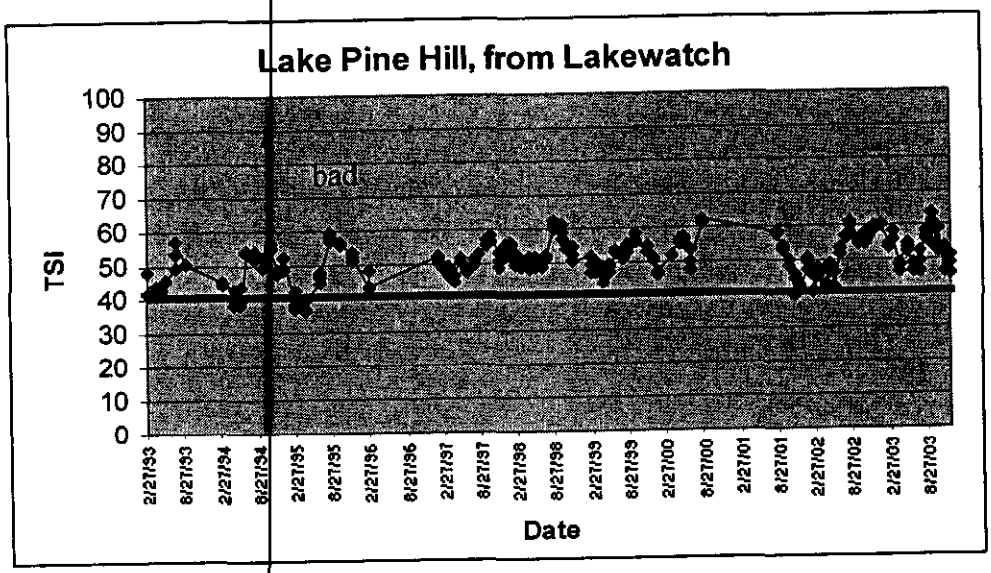

Figure 3: TSI's for Lake Pine Hill are the best within the KLP Chain of Lakes. They are not considered good.

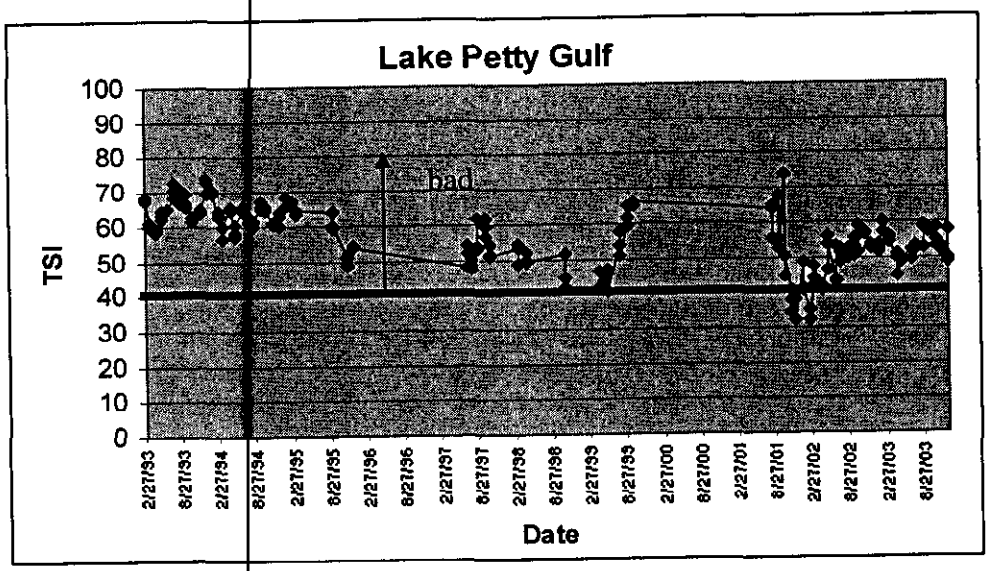

Figure 4: TSI's for Lake Petty Gulf are the slightly worse than Lake Pine Hill. They are not considered good.

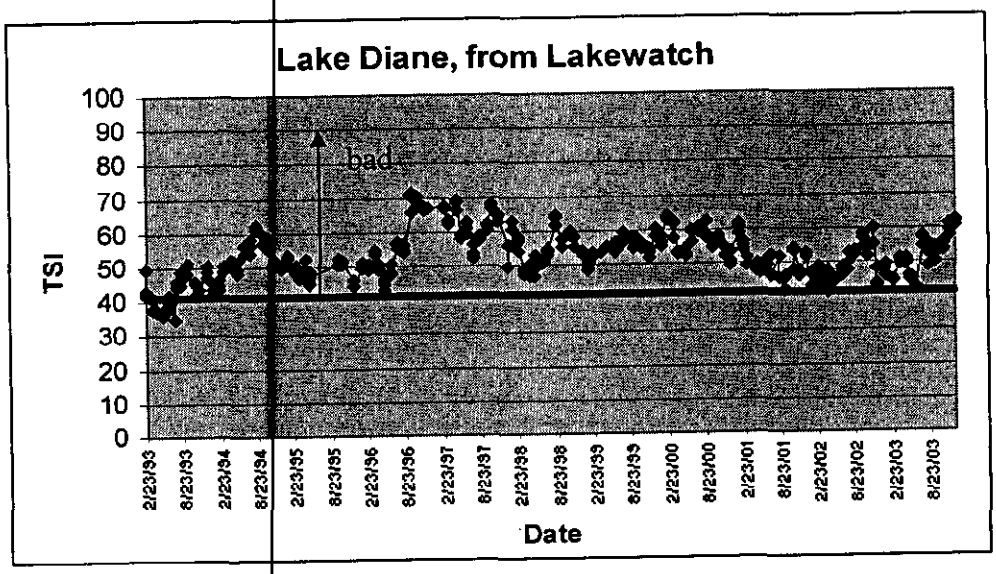

Figure 4: TSI's for Lake Diane represent the middle values within the KLP Chain of Lakes. They are not considered good.

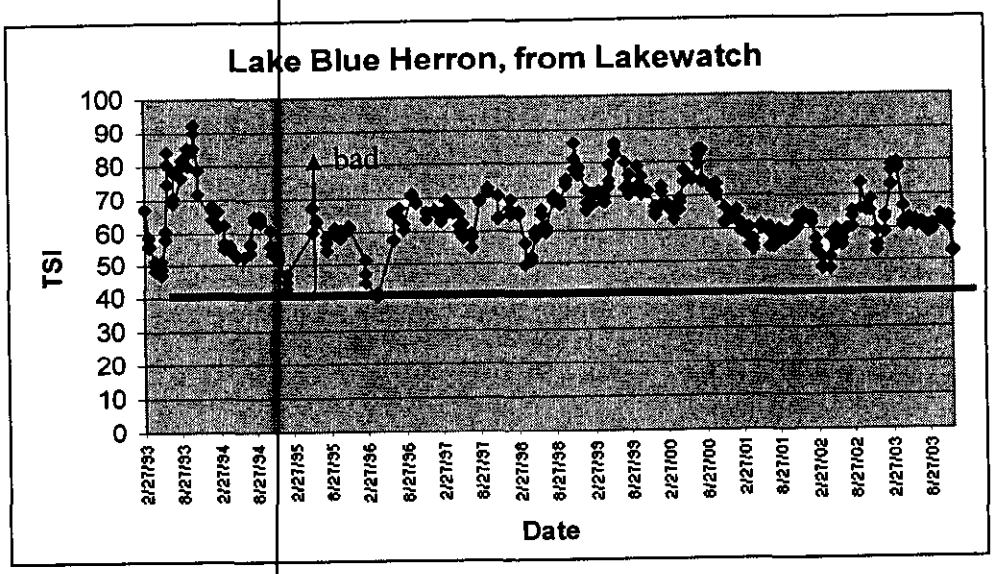

Figure 4: TSI's for Lake Blue Heron are the slightly worse than Lake Diane. They are not considered good.

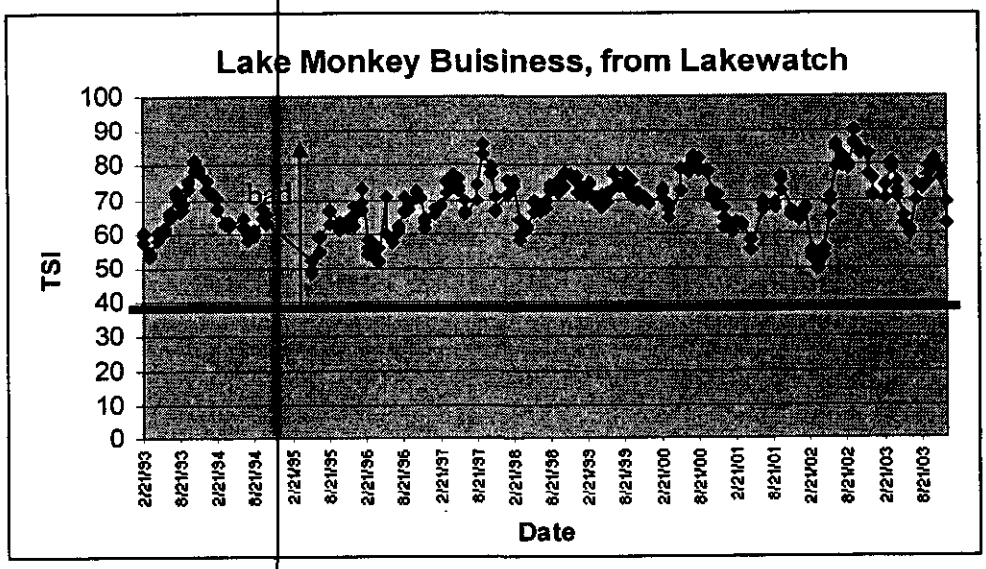

Figure 4: TSI's for Lake Monkey Business are the worst in the KLP Chain of Lakes. They are not considered good. This lake discharges directly into Lake Iamonia.

Summary: There is a lot of data showing that the water quality within the KLP Chain of Lakes is quite poor and has been in this state for some time. The Lakes with the worst water quality are the two (Monkey Business and Blue Heron) that discharge into Lake Iamonia. It has been shown in previous studies that the discharge from Lake Monkey Business into Lake Iamonia contributes to the nutrient enrichment of Lake Iamonia, an 'Outstanding Florida Waterbody' (OFW) that is on the FDEP's verified list and is scheduled for a TMDL in 2007.